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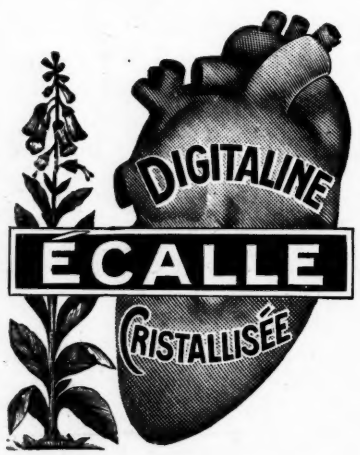

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MEDICINE AND THE PEOPLE:

A REVIEW OF SOME LATTER-DAY TRACTS.

BY

SIR T. CLIFFORD ALLBUTT, K.C.B., M.D., F.R.S.,

REGIUS PROFESSOR OF PHYSIC IN THE UNIVERSITY OF CAMBRIDGE; PRESIDENT OF THE BRITISH MEDICAL ASSOCIATION.

THE Report of Mr. Flexner upon *Medical Education in Europe*, 1912, a remarkable document for a while eclipsed by the Great War, and the two impressive Reports of Sir George Newman[1] not only mark a cardinal period in the history of Medicine but also, by showing us where we stand, contribute no little to its advance. As we issue from the mist these observers take our bearings on a new horizon, reveal to us our new positions and scenes, and determine our future course. Happily we are not far out of our reckoning, and are well on the way to our more immediate ends. Far indeed, it is true, from the summit of our climb, a summit after the manner of peaks, continually receding as we rise, we have reached nevertheless a shoulder of the hill whence the landscape is spread out before our eyes. We have journeyed thus far by half-conscious instincts, now henceforth for a while we can go forward in the light and direction of reason. At present Sir George Newman's latter Report, on Preventive Medicine, is occupying our attention; but, as the author himself insists, preventive and curative medicine are but the silver and gold of the two sides of the one shield; and "Education" in them is not only the instruction of the apprentice but also the nourishment of the practitioner and the equipment of the pioneer.

The Width of the Problem of Disease.

We are rather too prone to regard disease exclusively from the point of view of the organism—or rather, in our neglect and ignorance of comparative medicine, from the point of view of the human body only; a narrow outlook. However, whether in man, animal, or plant life, we are too introspective; or in the other extreme of late years too ready to cast back our gaze upon the *milieu* alone (a term unfortunately without an English equivalent): but the play of life, the physiological drama, lies not in either organism or *milieu* severally; it is an interplay, a halo about their common edges; in health a dynamic equipoise. Five hundred years before Christ physicians of the school of Croton (such as Alcmaeon) began to regard normal life as consisting in this "isonomy," this balance and reciprocation of inward and outward. And, if we see life as in this loom of woof and web, we shall understand better one of Sir George Newman's main themes, that—as, for example, in the phenomena of immunity—preventive and curative medicine, if for the limits of the human mind they must be studied in some severalty, are notwithstanding but different aspects of the same subject matter. Preventive medicine, as Sir George says, is by no means external sanitation only.

Disease then is some failure, or some discord in this interplay; some actor in the drama, on the one side or the other, has missed his cue, or struck the wrong note; or some foreign actor has thrust himself upon the stage. The result is that the interplay, the dynamic balance, attained in the continuity of readjustments over many ages, is disordered or upset. In spite of the great Ionian thinkers, and in the following of imaginary spirits and witchcraft, the notion that disease is an entity has reigned for hundreds of generations, and over realms of space, to the present day, when even considerable medical writers still continue to talk of diseases as "entities." Thus for our forefathers heat, for instance, was an entity, electricity a "fluid." Against this "daemonic" notion of disease Sir George Newman fights directly and indirectly.

The Body's Margin of Safety.

It is true therefore, as he himself and Sir James Mackenzie likewise earnestly contend, that one leading adventure of medicine must be to investigate the beginnings of diseases; that is, the first faint discords in the reciprocal interplay. Whether Sir James Mackenzie be right in shifting our point of search altogether or chiefly from the larger disturbances to those minor and incipient variations, wherein diseases begin, is another question. That this view must ultimately be taken there is no doubt; but probably at more advanced stages of pathology, not at the beginnings or earlier ways of research. If we read the stories of intrepid explorers, of pioneers who have discovered the sources of great rivers and the distributions of the streams of watersheds, we shall see that the method of following the several rivers up stream has been more successful than the endeavour to ascertain at the sources how to identify and describe the various and occult fountains of these greater rivers of the plain. To the present writer it seems that on this method, by tracking back from the main reaches of diseases, noting their various stages and branches, unravelling their complications, and comparing their features and directions in men, animals, and plants, we shall map out their several origins more quickly than by studying only or chiefly the areas where they are less differentiated. A cell may perhaps be ill in all ways at once; but a congeries of cells moulded into a system of various co-ordinate functions must in its disorders swing this way or that or the other according to the several lines of the lay out of its parts. With differentiation of structures must come a corresponding differentiation of lapses.

Another difficulty of study when directed mainly to incipient stages of disease and working down from these, is the large "margin of safety" with which our organs are, each and all of them, endowed. They all hold a store against extraordinary needs or assaults. It is a matter of familiar experience that a part or system of the body in man may on its own reserves have undergone no little deterioration or disadvantage before, on some larger demand, its failure becomes manifest. Moreover we know well how compensation in one department for default in another may mask the oncomings of disease. However let not our reconnoitring parties neglect any opening, occasion, or source for investigation.

While considering early or late deviations from the normal equipoise, we shall not allow ourselves to be entangled in terms; in terms such as diathesis, soil, susceptibility, and so on. For instance, to speak of the organism as a "soil" misleads teacher as well as disciple. That is an odd kind of "soil" which is rather the fed than the feeder; the warrior against insown germs rather than their nurse. Besides, by such phrases we are liable to get lost in the abstract, that continual peril of the student. May not individual vulnerability lie as often in some local peculiarity as in a vague and general proclivity; in the malformation, let us say, of a bronchiole or of a diverticulum, creating, or favouring, the accumulation of a local culture medium; or of a blood vessel, shutting off the nutrition of a part; or in the lack of a biochemical element, such as calcium? There is no inconsiderable field open here for the minuter anatomist, and for the student of beginnings.

The Allies of Clinical Medicine.

Anatomy is far from completion; physiology still offers an extensive unknown or unexploited field; pathology, great as are its recent achievements, leaves much yet to be done; still for Clinical Medicine—and Sir George Newman does well to beat in the claims of Clinical Medicine as the main purpose and end to which our efforts are to be directed, and as the key to social regenerations, material and spiritual—for Clinical Medicine these sciences have already done much and carried us far. But we must not forget that there are other ancillary sciences no less effectual, to which as yet we have scarcely betaken ourselves. The bearings of biophysics and biochemistry upon Clinical Medicine are not yet come into full view. Hopkins, Bayliss, Moore, and many others are calling to us from their remoter thrones, telling us what biophysics and biochemistry can do for Medicine; how we might push on would we but summon their young prophets to the bedsides of our patients. Yet our colleagues, and especially perhaps our surgeons whose great feats are our daily admiration, assure us that these views are "speculative," remote, and "academic"! The truth is quite utterly otherwise: it is since the present writer, after twenty or more years of lecturing on Medicine, had, from the outbreak of the war to the present time, again to undertake

[1] *Some Notes on Medical Education in England*, 1918 (Cd. 9121), 3d. net.; and *An Outline of the Practice of Preventive Medicine*, 1919 (Cmd. 365), 6d. net. H.M. Stationery Office; to be obtained through any bookseller.

full personal responsibility for the treatment of hospital patients, that he has perceived the close limits of our knowledge and the bright promise of these "academic" studies of applied physiology, pathology, and now emphatically of biophysics and biochemistry. Arrangements have accordingly been made for the co-operation of a biochemist also with the clinical staff of the Addenbrooke's Hospital. How can we be satisfied with empirical routine when we find ourselves face to face with the intimate working of colloids and their syntheses with crystalloids that, in health and disease, governs those very movements of fluids and solids throughout the body, with which we are incessantly concerned, that governs normal secretion and excretion, and in disorder the retention or discharge of morbid excrements? Or, again, when we are face to face with the changes of viscous fluids to and from more rigid forms; with the vast range of catalytic action, as of the ubiquitous enzymes, normal and hostile, of vitamines; and of those balances of chemical equilibrium within the corporeal system which the researches of Professor Starling, Professor Schafer and others have shown to us, shall we not try to learn their physical and chemical paths? And this outlook is far from being even a sketch of what might already be revealed from this point of view, the point of view, or one of them, from which Sir George Newman has appealed to us; that we should take, and give to our pupils, the "university quality" of learning, that we should lift medicine—preventive and clinical alike—out of the ruts of mere cleverness, adroitness in detail, handbook learning, empirical rules, into a larger and steadier atmosphere. Not that these qualities of handiness, dexterity, quick sight, versatility, are valueless, indeed they are precious; but they are gems which ought to be set in a far larger design.

The Risk of a Rootless Tree.

Conversely, the scientist has much to learn from the artist. Of middle-men who shall join the discoveries of the scientist to the practice of Medicine we are lamentably in need. Sir George Newman has insisted again upon this urgent need, as for "Clinical units" in our city and university hospitals. But, although such leaders and such "teams" are to forge ahead, instructing and inspiriting their followers, yet much of the advance depends also upon the rank and file. How then are the practitioners, the artists of Medicine, to aid in maintaining and developing this larger design? Such is the question that Sir George Newman anxiously reiterates, that physicians and the public have now to consider. Meanwhile he urges, as many others of us have pointed out, that a contrary and mischievous tendency is at work to shake the whole structure of British Medicine by undermining its foundation, the foundation of the "general practitioner." When the midwives are in possession of births, the infants under maternity nurses, the tuberculous and venereally infected gathered away under their several wings, the fevers moved off to isolation, the preventive methods—which penetrate the curative—handed over to officers of health, and even the cases of minor surgery collected in Hospitals or "Homes," what is to become of General Practice? It must descend to the sweeping up of trifles outside the orbits of these constellations of specialists! The tree, all top and no roots, must wither. Now let us think of this, when we learn that in 1918 ninety-two thousand fresh cases of tuberculosis were notified; and six thousand five hundred of ophthalmia neonatorum; and that rheumatic fever is probably not far behind.

Roots and Branches Both.

How this peril to family practice is apprehended, and how it should be provided against, Sir George Newman forcibly and critically declares in these constructive essays. Gladly we learn that one large edition after another of both Reports is being rapidly absorbed. The seed is falling on good ground. The Author repeats that the family physician must, by revised education and provision of the means, be enabled to work on these larger lines. That by education he is becoming year by year more fit to accept and to develop the sciences of Clinical Medicine the present writer has ample evidence. It may be forgotten that the Budget, which unhappily was suffocated in 1914 by the War, contained such a provision—a substantial grant towards the provision of a comprehensive laboratory in every health area of England, whether affiliation to a university were available or not; but in any case linking up to the local hospital as the medical centre of the area. So far as the present writer is aware, only one such laboratory has come into existence apart from a university—namely, in Wolverhampton. This excellent Institute, sadly deranged as it has been by the War, is now again in full work, under Dr. S. G. Billington; and practitioners in the district, on the restoration of home work, are making more and more use of its aids and incentives.

Did space permit, some fuller reference might be made to the very promising movement in the United States for the formation of medical groups, or large partnerships. A certain number of the general medical practitioners in a district combine to provide central offices, where provision is made for scientific diagnosis, and for treatment medical and surgical. The members in turn are encouraged to give especial attention to this or that department of practice, and so are released for occasional attendance at special university clinics, both at home and abroad; and holidays are mutually arranged in like manner. This thoroughness of the diagnostic methods makes the scheme popular with the public, and lessens domiciliary rounds. The revenue is said to be larger than the sum of the independent practices.

After all this introduction much, indeed the chief part, of Sir George Newman's Reports must be left to the readers of them. We want, as he says, to instil new "health habits and health conscience." Our readers will recall *Punch's* recent picture of the soldier son, home on leave, tubbing himself vigorously in the back kitchen to the wonder of his slovenly old parents at the fireside, "He gives way to it, Mary, that's where it is." Sir George looks forward to yet larger federations of workers, from professors to health visitors and mothercraft; to more and better playgrounds, open-air schools, and summer camps; to better housing; to eugenics; to dietetics; to more personal cleanliness, especially of the teeth and mouth; to the reform of infirmaries, and their alliance with the voluntary hospitals; to a reconstruction of psychiatry; to reforms of industrial conditions, to extension of health and unemployment insurance and to other such efforts for the banishment not only of overt maladies but also of "all the crippling morbidity and invalidism" which sap the vitality of the nation, and "impair intellectual and moral fibre." Moreover the amenities of life make for health as well as happiness.*

Comparative Medicine.

We look forward to further reports from Sir George Newman, and would welcome from his hand a judgement on the importance of Comparative Medicine, a study, as we have said, unaccountably neglected. What the comparative method has done for anatomy and embryology, for ethnology, for philology, for sociology, for religions, and so forth, we know and prize; yet for Medicine, a study no less needful of this method, we have no systematic organization of workers or plants. Whatever little is done in this way is fragmentary and incidental. A *hiatus valde deflendus.*

The Guardian of the Tabernacle.

It is strange that not until the present generation did we recognize the "masses of the people." Even the vast imagination of Shakespeare himself failed to see in the people more than a malignant and turbulent herd. The "churches" are said to have "failed"; if in the past ecclesiastics have failed, Christianity has at length revealed our brethren the people to our hearts, and opened to them our sympathy. And it is in this spirit, in his intense humanity, that Sir George Newman represents his epoch and kindles in us a new hope, leading us to a wider vision, to a more unselfish devotion to the public good, to a liberal sympathy with all men in town, village, and field; to co-operation with the highest aspirations of the individual and of the national mind. He proclaims to us that the human body is the tabernacle of the spirit of Man, and that if the instrument be out of tune the music is discordant and dies.

* In respect of the amenities, in addition to sanitation, as a great part of hygiene, public and private, see the interesting reports of the work done under the Carnegie bequest at Dunfermline.

THE DIAGNOSIS AND TREATMENT OF CHRONIC GASTRIC ULCER.*

BY

SIR BERKELEY MOYNIHAN, K.C.M.G., C.B., F.R.C.S.,

SURGEON, LEEDS GENERAL INFIRMARY.

[*With Special Plate.*]

AROUND the subject of gastric ulcer a very extensive literature has accumulated. Every country, and a host of authors, have contributed to it, until there must be many who doubt whether anything really fresh or important remains to be said. Yet I hold a firm belief, based upon an experience the length of which I dread to contemplate, that no small part of what is written requires ruthless revision in the light of the modern methods of inquiry conducted by the radiographer and the surgeon. The wealth of teaching in the textbooks is too often impersonal, and represents rather a legacy flowing from one's ancestors than a fortune newly won by hard endeavour. The heritage in respect of gastric ulcer is heavy enough, but not all of the securities are worth their face value.

A gastric ulcer is, of course, an ulcer occurring in the stomach. During development the stomach is differentiated as one part of the foregut from that other part which forms the duodenum as far down as the ampulla of Vater. The foregut terminates at the point of entrance of the ducts of the liver and pancreas; at the end of the second month of fetal life the pylorus marks off the stomach from the duodenum. When development is complete it is as a rule easily possible in all periods of life to distinguish the stomach from the duodenum. On palpation the pyloric muscle and valve are felt at once. Exactly in the line of the pylorus a thin white line is to be seen on careful examination; the line becomes clearer if in the living subject the pylorus is held forward by a finger and thumb placed one on the stomach, the other on the duodenum, and closed to meet in the pylorus. In close proximity to the "pyloric white line" is a vein, the "pyloric vein," which begins at or near the middle of the anterior surface of the pylorus and runs downwards to the greater curvature. The "pyloric vein" is constant, its arrangement variable. It may be single and large, short and branched, or long with only very slender branches; it may be double; it may or may not be met by a smaller vein running up towards the lesser curvature; it may lie on either side of the pyloric white line. The perfectly fair criticism has been made against the acceptance of this vein as a landmark, that veins are very irregular in their arrangement, position, and distribution, and that nowhere else in the body is the position of a vein so constant as this is asserted to be. And it must be frankly admitted that there is a very small number of cases in which the venous arrangement is such that no accurate localization of the pylorus is possible from a surface inspection. But there is no landmark in the body that is invariable. For many years past I have drawn the position of this vein as seen during an operation while the parts were under inspection, and it is quite safe to say that in at least 90 per cent. of the cases the markings I have mentioned may be accepted as accurate. Latarjet (*Lyon Chirurgical*, 1911, vi, 337), after a research conducted for the purpose of deciding the value of the vein as an accurate landmark, concludes in favour of its acceptance.

An ulcer occurring on the proximal side of this vein is a "gastric ulcer"; an ulcer occurring ¼ in. or ½ in. or more beyond it is a "duodenal ulcer." It is not merely a matter of academic interest to distinguish them; their symptoms are sufficiently distinct to allow an accurate diagnosis of duodenal ulcer to be made with remarkable constancy; their complications and sequels in respect of perforation and haemorrhage are very different; cancer develops often upon the base of a gastric ulcer, and almost never upon the base of an ulcer in the duodenum. Gastric ulcer is a disease of comparative rarity; its diagnosis from the clinical evidence alone is difficult; its mimicry by other conditions extremely frequent. These statements may not find a ready acceptance everywhere. For if the textbooks of medicine, or the special works of distinguished authors are read, or if the diagnoses made in the out patient medical clinics are reviewed, it will be found that there is a general agreement that gastric ulceration occurs frequently, and that its symptoms are of a kind hardly admitting of doubt or difficulty in diagnosis. I have spent a great deal of time in reading almost everything to which I could obtain access that has been written about gastric ulcer, and I am compelled to say that when the statements universally made are tested by the experience gained in the operation theatre they are found to be inaccurate. My contention is that a full, clear, and truthful description of the symptoms of gastric ulcer is rarely given; and that the conditions described as "gastric ulcer" are in the majority of cases indicative of other diseases.

What are the symptoms of gastric ulcer, and how may the diagnosis be made?

Ulcer of the stomach occurs twice as often in men as in women; its chief symptom is pain. All the attributes of this symptom merit and must receive the closest scrutiny. The chief attribute is, I think, regularity. In all cases of gastric ulcer there are periods of intermission, longer or shorter, at one period of the year or another; but when the attacks are present the pain which is then the chief feature always displays regularity. It comes after all meals, even light meals; it is not present after breakfast on one day, after dinner on another, and absent entirely on another day. If a meal is eaten, pain during the attack follows invariably. The interval between the taking of the meal and the onset of pain is fairly constant. As a rule the earlier the pain is felt after a meal the nearer is the ulcer to the oesophagus. That is to say, if pain comes, regularly, one or one hour and a half after a meal, the ulcer that causes it is in the stomach, it is a "pre-pyloric" ulcer. If pain comes two, three, or four hours after a meal the ulcer lies generally beyond the pylorus. This period of relief from pain after a meal is constant and invariable, both in gastric and duodenal ulcers, until stenosis, subacute perforation, or the formation of crippling and embarassing adhesions takes place. These conditions may lead to a delay in the time of the appearance of the pain in cases of gastric ulcer, or to the hurried appearance of the pain in cases of duodenal ulcer.

In over three cases in five of gastric ulcer, seen during operation, the pain came within one and a half hours of the taking of food; in rather more than four cases in five of duodenal ulcer the pain appeared two hours or more after food. The pain in cases of gastric ulcer very often disappears after an hour, or even less, and may be completely relieved, indeed it generally is, before the next meal is due. The pain of duodenal ulcer, on the other hand, appearing later, generally persists, often with a slowly increasing severity, until the meal is taken. The character of the meal influences the pain. A generous meal of heavy foods causes severe pain to appear at an earlier time in gastric ulcer; it delays the appearance of the pain in cases of duodenal ulcer. Smaller meals of soft, pultaceous food, easy of digestion and easily propelled, produce less pain, and the interval of relief brought by the food is longer. An indiscreet and hasty meal, especially of fruits, or salads, or pastry, may give instant and grievous pain. A bland and blameless diet taken in small quantities at brief intervals may reduce the chances of pain appearing, or even afford complete relief. In a small proportion of cases pain may not be influenced by food in the manner and to the extent now described. When the ulcer is near the cardia there may be no relief from taking food, or pain may immediately be made worse; each of these features is present in approximately 4 per cent. of the cases.

The pain is variously described: it is a deep, "boring," "burning," or "aching" pain; there may be "gnawing" or a sense of acidity and a desire for food or warmth. The pain in a majority of cases is said to be on the left side or high in the epigastrium; in some severe types there may be great complaint of pain in the back. In twenty-three cases in which there was a deep excavation in the pancreas consecutive to a subacute perforation of the ulcer on the lesser curvature or posterior wall of the stomach, seventeen patients complained bitterly of the intolerable aching in the back. As we know, many patients attacked with acute pancreatitis suffer most from pain in the back, and it is an old observation and an accurate one that a deep eroding ulcer of the pancreas may also produce this most distressing symptom.

* A paper read at the opening of the session of the Harveian Society, October 23rd, 1919.

The position of the ulcer, its freedom from adhesion to neighbouring parts, and its size, all seem to affect the type of pain, its periods of latency, and its time of onset after meals. When ulcers are small and seated high up on the lesser curvature, or just on the posterior surface, the symptoms are shorter in duration, but more prone to recurrence. They are often, as we learn from the radiographic examination, attended by severe forms of local spasm, which are responsible for the sensations of distension, weight, and pressure, which appear to accompany these ulcers more often than those of other types. If the ulcer is large, excavating the liver, or burrowing deeply into the pancreas, or if it is fixed by firm broad adhesions to the abdominal wall or the liver, the symptoms are less likely to show those intermissions which are so characteristic of the earlier stages. If, therefore, in the history of an individual case we learn that the periods of freedom from suffering have become by degrees shorter, and have finally vanished, we may often predict that some of the conditions named are present. If, in addition, there are wasting and especially anaemia, we may be very suspicious of the onset of malignant disease.

Relief from pain is obtained not only from food, but from alkalis, sodium carbonate, "mint drops," or from vomiting. Lavage of the stomach often gives great temporary relief.

The fact that the severity of the pain is so often mitigated by food accounts for the fact that many patients do not lose weight, or may actually gain weight during an attack. Patients with gastric ulcer recognize that heavy meals three times a day bring their own punishment. Lighter meals are taken at shorter intervals, and the total amount of food, much of it of high value, is accordingly far greater than that usually consumed. Weight is therefore gained.

About one-fifth of the patients who are found to have gastric ulcers complain not only of pain, but of great prostration, feebleness, or lassitude coming on just at the time when the pain is due. On close inquiry this most distressing symptom may be found to have preceded the experience of pain by weeks or months. The periodicity of the two is identical.

It is not possible to emphasize unduly the importance of ascertaining all these various modifications of the one symptom pain. The constancy of the sequence—food, comfort, pain; food, comfort, pain—is the most important of all the clinical matters concerned with the diagnosis of gastric ulcer.

The next symptom in point of frequency is *vomiting*. In all forms of ulceration of the stomach or duodenum vomiting is an inconspicuous feature, unless obstruction has developed as the result of the cicatrization of the ulcer. Indeed a degree of obstruction which is by no means trivial may be present, and yet vomiting is very infrequent or entirely absent. It is no uncommon experience to hear a patient say, "I never vomit," and for an operation to disclose an extensive ulcer or a moderate degree of stenosis in the body or near the pyloric orifice of the stomach. Patients seem to have a great capacity for estimating the degree of tolerance possessed by the stomach, and of taking only such foods, or foods in such measure, as will arouse no resentment. In the earlier stages of the development of their malady vomiting is not seldom self-induced in order to ease the stomach of a heavy load, and a sense of pressure and distension. But a very little experience seems to teach the greater number of patients the quantity of food that is appropriate for them. Thereafter vomiting occurs quite infrequently. It has probably been present on a few occasions in more than half the number of patients who have suffered in many attacks; but it is rare to find that quick reference is made to it when the history is being disclosed.

When in the record of any patient suffering from "dyspepsia" there is a story of frequent vomiting, of the inability of the stomach to tolerate the presence of any foods, of even fluid nourishment sparsely taken being at once rejected, the thought that gastric ulcer is the cause should be driven from one's mind. That type of history, which is commonly heard, is, I find, rarely present in cases of organic disease of the stomach. The vomiting due to the presence of an ulcer is infrequent, and occurs almost always not immediately after food, but after a shorter or longer interval. The meal at first causes relief, and only after that period of relief does it cause disturbance.

Haematemesis also occurs far less commonly than is supposed. Haemorrhage manifest as melaena, or in the vomit, is recorded in less than 25 per cent. of my cases; in the majority of these the amount of blood lost was trivial, and of many in which "haematemesis" is recorded it is at least doubtful whether blood was, in truth, present. I think it is true to say that when blood is discharged from the stomach either in a fresh state or as "black vomit," it is commonly believed that a chronic ulcer is present. There is a great fallacy in such opinions. That gastric haemorrhage occurs, and occurs profusely, in ulceration both of the stomach and duodenum is certain; but the number of other conditions that give rise to haemorrhage is so large that the possibility of a gastric ulcer being the source of the blood should not be strongly, or exclusively, held. I have so often seen haemorrhage of the most abundant kind ascribed to "gastric ulcer" which was caused by such other conditions as splenic anaemia, cirrhosis of the liver, appendicitis, and other infective conditions within the abdomen, that in the elucidation of the cause of such a condition as profuse haematemesis I seem to turn to other possibilities than gastric ulcer in the first instance. It is true that there may be a confusion as to terms here. For when a patient dies of such haemorrhage a very close examination of the gastric mucosa may reveal the existence of tiny chaps, or cracks, or fissures from which blood has certainly issued. And when in the old days of unwisdom we operated upon such patients and explored the cavity of the stomach the mucous membrane was said to "weep blood," little trickles of blood could be seen to issue from many points. But these little gaps in the mucosa are not ulcers of the kind that produce clinical symptoms. If a patient has suffered for months or years from dyspepsia, and then is seized with an acute attack of vomiting and haematemesis, and if an operation urgently performed reveals the condition of the mucosa I have just described, it is the worst of fallacies to connect the dyspepsia with the "ulcer" or ulcers then supposed to be present in the stomach. The ulcer which has caused repeated attacks of indigestion is always a gross lesion, a lesion in which there are present not only the evidences of destruction, but also of defence; around the crater of the ulcer is an area, greater or less, of inflammatory action, and the serous coat of the stomach is plainly involved. If the breaches of continuity which permit the escape of blood in cases of cirrhosis of the liver, splenic anaemia, and the toxic conditions which, as a rule, have their origin within the abdomen, are called "acute ulcers," as they often are, it is essential to remember that such ulcers are recognizable by no other clinical evidence than haemorrhage, or in exceedingly rare instances by perforation; they are never the cause of a continuing or recent dyspepsia. The relation between acute ulcers and the chronic ulcer which is so disabling is not certain. Dr. Bolton, whose work on *Ulcer of the Stomach* is the best of all books on its subject, believes that one is a sequence of the other. He is probably right. Yet the acute ulcer as such gives no other clinical indication of its existence than haemorrhage or perforation. The diagnosis of "gastric ulcer" in these cases of grave haemorrhage was held to be confirmed by the after-history and the results of medical treatment. The patients regained health rapidly, soon lost their anaemia, and were able to take food without restraint. But everyone who has considered the history of cases in which there has been a copious haemorrhage from the stomach will agree that this rebound to full and vigorous health is quite common. It is so even in cases in which at a later operation a frank gastric ulcer is seen.

Such, briefly stated, are the symptoms of gastric ulcer. As will be realized, the chief dependence in making a diagnosis is placed upon the one symptom—pain. What are the other methods of investigation which can help us to a decision? Chief among them I now place the examination of the stomach after a barium or bismuth meal by *x*-rays. In this work I have relied upon my colleague, Mr. Scargill, and I am greatly indebted to him for his most careful and accurate work and for the skill which he shows in the technical sides of it. His methods, which follow closely upon those of R. D. Carman of the Mayo Clinic, show that the possibility of making an accurate diagnosis of gastric ulcer is greatly increased by the *x*-ray examination; that, indeed, the radiographic examination alone is more accurate than all other

Radiographs by Mr. H. B. Scargill illustrating Sir Berkeley Moynihan's Paper.

FIG. 1.—Very small "niche" type of ulcer on lesser curvature. Involves stomach wall only. No incisura seen in this case. Wire marks costal margin.

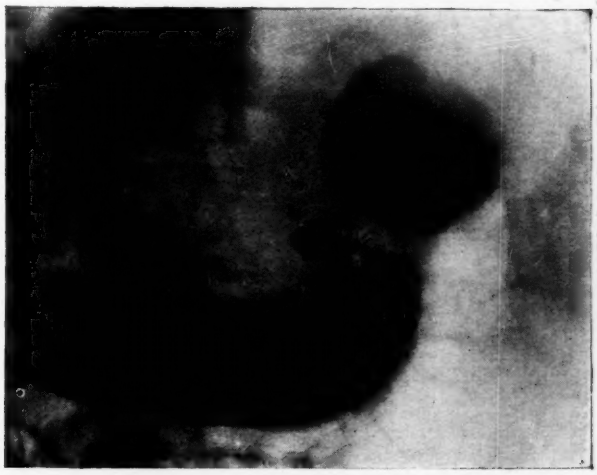

FIG. 3.—Ulcer crater on lesser curvature penetrating lesser omentum and adherent to left lobe of liver. Well marked incisura.

FIG. 2.—Ulcer crater on lesser curvature penetrating into lesser omentum. Well marked incisura on the greater curvature, almost bisecting the stomach.

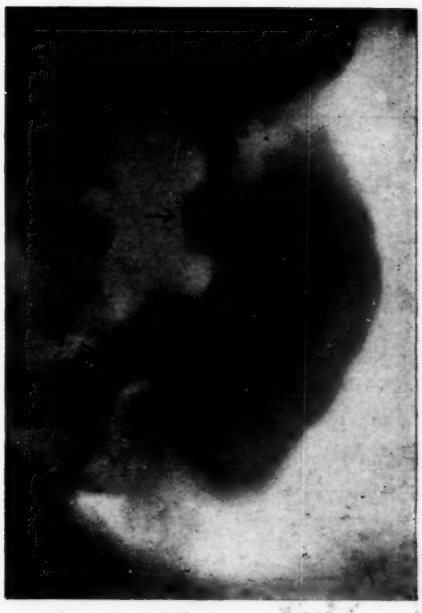

FIG. 4.—Ulcer crater on lesser curvature. Incisura in this case is a little above the level of the ulcer.

Radiographs by Mr. H. B. Scargill illustrating Sir Berkeley Moynihan's Paper.

FIG. 5.—Ulcer crater on posterior surface near lesser curvature, only seen when stomach was almost empty. At operation found adherent to pancreas.

FIG. 7.—Groove-like ulcer on the lesser curvature 1½ in. long. Very well marked spasmodic hour-glass contraction. No hour-glass at operation.

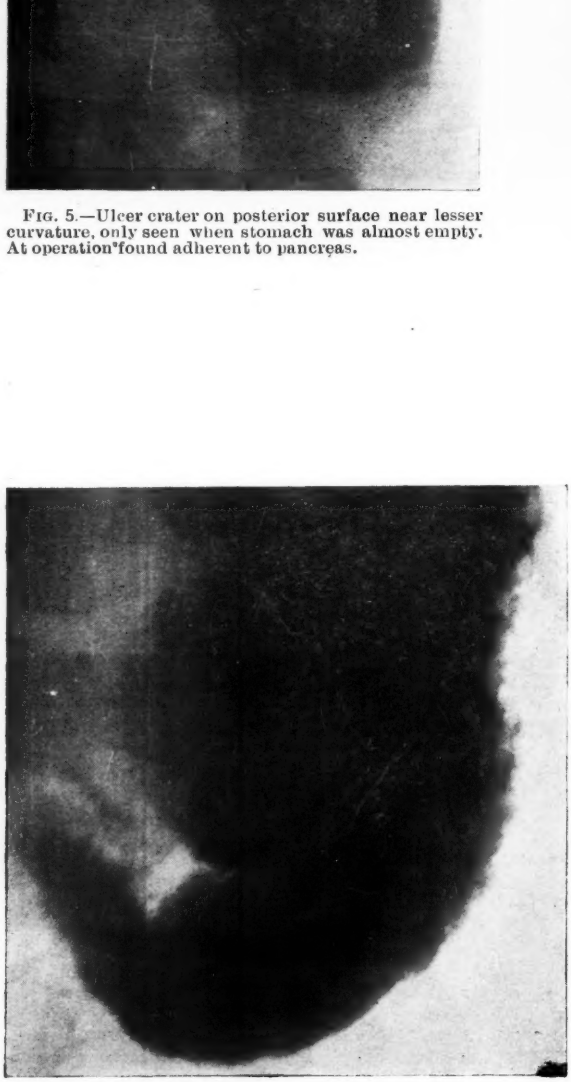

FIG. 6.—Huge ulcer cavity on lesser curvature penetrating left lobe of liver. *The cavity was nearly 3½ in. long.*

FIG. 8.—Ulcer crater on lesser curvature with well marked incisura. (Dr. G. W. Watson's case.)

methods combined, and that a diagnosis which is proved by subsequent operations to be correct in indicating the presence of the ulcer or in demonstrating its size and position can be made in about 90 per cent. of cases.

The following is his method of examination: After a few hours of fasting, when the stomach is presumed to be empty, a bismuth or barium meal of thin consistency is given, and six hours later the first examination is made. By this time a normal stomach is able to empty itself of the small amount of opaque food administered. If a residue is seen, there is a delay indicating defective action. A second similar meal is now given and the stomach examined forthwith. The radiographic signs of gastric ulcer are:

I. *Direct.*—The ulcer cavity itself is demonstrated. If an ulcer has penetrated into the walls of the stomach, or eroded the liver or the pancreas, or perforated subacutely and become adherent to the abdominal wall, the crater of the ulcer can be seen filled with the opaque substance of a meal. If the ulcer is near the lesser curvature, it is visible in either an antero-posterior or semilateral view. If the ulcer is on the posterior surface the best view is obtained when the stomach is emptying. An ulcer on the anterior or posterior surface of the stomach close to the pylorus is more difficult to demonstrate.

II. *Indirect.*—In the majority of cases of gastric ulcer a very remarkable and sustained contraction of the circular muscular fibres of the stomach occurs in or near the segment on which the ulcer lies. An indentation of the greater curvature, of varying degree and extent, but often so considerable as to appear almost to bisect the stomach, is most clearly seen. Its appearance, whether on the screen or on a photographic plate, is remarkable. The spasm, in the majority of cases, remains stationary during the examination; it is unaltered by palpation, massage, or by the administration of large quantities of belladonna. It relaxes under a general anaesthetic, and is not seen on the operation table, the stomach wall being then quite soft and flaccid. A similar "incisura" is present as the result of extrinsic causes—causes lying, perhaps, remote from the stomach. The commonest excitants are duodenal ulcer, infection of the gall bladder, with or without stones, and chronic appendicitis. The spasm due to these causes is variable in position and duration, is modified by massage or pressure, and relaxes almost always after the administration of atropin given in an amount which produces a physiological response. It is also inconstant, present on one occasion, absent on another, and changes capriciously.

The presence of the persistent spasm is strong presumptive evidence of the existence of an ulcer; the presence of an "incisura" on the greater curvature, with a "bud-like" opaque projection on the lesser curvature, is an unequivocal evidence; in every such case an ulcer is present.

The radiographic method is the one certain method of diagnosis, and is now an indispensable addition to the older and far less accurate procedures.

Of the chemical examination of the stomach contents I do not speak with any enthusiasm. For several years my patients were submitted to this form of investigation, but I cannot think that the evidence thereby obtained enabled a greater accuracy to attach to the diagnosis or justified the increased trouble it gave to them. Hyperchlorhydria is present in so many other diseases than gastric or duodenal ulcer that its presence does not offer positive or even contributory evidence of any real value. In rather over 40 per cent. of the total number of cases in which an ulcer is present there is no hyperchlorhydria, and in a small number, estimated at from 10 to 20 per cent., there is a reduction in the gastric acidity. For reasons connected with the war I have rarely submitted patients to this form of inquiry in the last four years, but it will be interesting to discover the relationship, if any, between the degree of gastric acidity and the quality and duration of the gastric spasm due to extrinsic as well as intrinsic causes.

Physical examination, in the absence of obstruction in the body, or at the outlet of the stomach, reveals very little. There is a record of tenderness in the epigastrium in almost every one of the patients who are subsequently found to have an ulcer in the stomach. In ulcers of the lesser curvature I have sometimes found great tenderness high up on the left along the costal margin—tenderness which becomes more acute when the patient breathes deeply. The kind of sensitiveness is then present on the left side which on the right establishes "Murphy's sign." The signs in pyloric obstruction, and in hour-glass stomach are, of course, well known.

If all the methods of examination are strictly brought to bear upon the cases commonly referred to as those of "gastric ulcer" it will be found that in a majority the diagnosis cannot be upheld. The diagnosis of gastric ulcer is loosely and inaccurately made; a host of other diseases, functional and organic alike, are so described, and in consequence the belief is widely held that "gastric ulcer" is a common disease. It would be more accurate to call it a rare disease. Over a series of years I find that for every gastric ulcer seen on the operation table, there are four or five duodenal ulcers, and five to six cases of cholelithiasis. A gastric ulcer is by no means easy to recognize even after the most scrupulous inquiry and examination. More mistakes are made in the diagnosis of gastric ulcer than is the case in any other abdominal disorder.

It must now be generally recognized that many of the diseases arising in connexion with the abdominal viscera, for months or years, looked upon as cases of gastric disorder. I pointed this out a few years ago in two papers published in the BRITISH MEDICAL JOURNAL (October 19th, 1907, "Pathology of the living," and November 28th, 1908, "Inaugural symptoms"). Up to the time of the publication of these articles it had not been recognized that in cholelithiasis, for example, all the prodromal symptoms were attributed to defects in the stomach, and the medicaments administered were in consequence those used in gastric diseases. The same statement holds good with regard to chronic disease in the appendix, in the small or in the large intestine. We are now familiar, as the result of *x*-ray examination and of the chemical examination of the gastric contents, with the truth that all these conditions express themselves in terms of gastric disturbance, of hypersecretion, and of spasm. And at the time when operations are performed we can discover by inspection of the stomach such conditions as enable one to predict that a lesion will be found on closer manual examination, not in the stomach, but in the appendix or its neighbourhood.

If, for example, a patient has had a type of dyspepsia which has led to a diagnosis of gastric ulcer and an operation is performed, the stomach may show no scar, nor can any examination, however careful, display the ulcer whose presence was predicted. If, however, the stomach is closely inspected before it is handled the following conditions may be seen: The pyloric part of the stomach is decidedly redder than natural—there is a "pyloric blush." That part of the stomach is soon observed to contract eagerly and vigorously; sometimes the spasm is so severe and so prolonged that there may be a suspicion of a tumour, but by degrees the spasm relaxes, and the parts become supple again. The spasm may be irregular, now at one part, now at another; now slow and deliberate, now fugitive. Along the greater curvature the glands are enlarged. When these three conditions are seen the prophecy may be confidently made that the stomach is healthy and that the appendix (or one of its neighbours in the alimentary canal) is diseased. In such cases gastro-enterostomy has often been performed, sometimes, it is curious to note, with benefit, but as a rule with disastrous effects. It has been my lot to perform a secondary operation upon many such patients, and to remove a badly diseased appendix or to resect a tuberculous intestine, and perhaps to undo the anastomosis which should never have been made. The work of Cole, Barclay, Carman, and others explains quite clearly how it comes about that these intestinal disorders affect the stomach and cause its musculature to contract in the irregular and painful manner which raises the suspicion, or seems to make certain the opinion, that an ulcer is present. But there is also the infective element in such cases, as Wilkie has shown experimentally, and it is the toxaemia which is its outcome that leads, as Spencer and Hutchinson have shown, to profuse haemorrhages from the stomach.

The stomach is an organ full of sympathy for other sufferers. Hardly any of the viscera connected with the intestine, or the bowel itself, can be affected without the stomach playing its part in the disturbance also. This it does by pouring out an excess of secretion, and by

tumultuous and irregular activities. It speaks so loudly that its voice only is heard.

The whole subject now briefly mentioned requires close and prolonged investigation. We must seek to find out as accurately as possible the clinical indication that will lead us to diagnose a ver table lesion of the stomach in certain cases, and in others to be able confidently to say that the stomach is intact, and that other organs are te ling the story of their own disease in terms of stomach d.scomfort.

Differential Diagnosis.

The very great difficulties in the diagnosis of gastric ulcer are due to reasons which we can now fully appreciate. An ulcer of the stomach does not arouse symptoms merely because of the gap in one or more of the several layers of the stomach. We may be certain of this because, after an "attack" of gastric ulcer is over, and the patient is wholly free from symptoms, an operation may disclose the open crater of an ulcer large or small. The exact cause of the symptoms is uncertain, but, so far as we know at present, other conditions, in addition to the structural defect, must be present before the symptoms appear. These are:

I. Evidences of infection round the ulcer, such as induration, local peritonitis, the deposit of fat in and around the base of the ulcer, and enlargement of neighbouring glands. The "sentinal gland" of Lund is constant in cases of active ulcera'ion.

II. Spasm of the musculature of the stomach. Of the presence, severity, and duration of this condition we had very little knowledge until the methods of examination by *x* ray became perfected, chiefly by R. D. Carman. We now know that a high degree of spasm is present and constant in examples of ulcer of the stomach, and present, though inconstant and variable, in those cases where there is no primary lesion in the stomach.

III. An increase in the acidity of the gastric juice. This hyperacidity is by no means constant either in gastric or in duodenal ulcer, but it is possibly a factor of importance in the awakening of symptoms.

These three conditions—infection, localized spasm of the gastric muscle, and hyperacidity—are all present not only in true ulcer of the stomach but also, in varying degrees, in most of those distant conditions which are able to arouse a gastric reflex; and it is their presence which causes that mimicry of the symptoms of gastric ulcer by other lesions which may be so exact as to deceive the most expert inquirer. My own strong feeling is that in order to obtain precision where so much has been vague, no diagnosis of chronic ulcer should now be confidently accepted unless the ulcer is diagnosed by *x*-ray examination or is displayed upon the operation table.

The diagnosis of gastric ulcer from a study of the clinical and chemical evidences alone is so uncertain; the various methods of treatment associated with the names of Lenhartz, Leube, Cohnheim, Bolton, Sippy, and others, so helpful in all cases of infection of the alimentary canal, and the physical repose which accompanies the treatment so weighty an influence for good, that no certain conclusions can be drawn from even a long series of cases. What is needed nowadays to attest the value of medical treatment is an assured diagnosis of gastric ulcer before the treatment is begun. That has most certainly been lacking in the past. Of the methods of treatment, that laid down by Dr. Sippy of Chicago would appear to be the soundest, and to meet more fittingly the conditions in the stomach, which, it is thought, must be controlled before an ulcer has the chance to heal.

How great the difficulty in diagnosis really is could not be better shown than by a study of those cases in which the patients have been given over to the care of the surgeon for treatment, and in which the operation of gastro-enterostomy has been performed without benefit. There was a time when this operation was held to be the certain cure for ulcer of the stomach. If its "mechanical" virtues were not urgently needed because of the obstruction caused by the ulcer, its "physiological" effects at least would be salutary. A list of the diseases called "gastric ulcer" by careful medical men, often after consultation with others, and treated by operation, was considered by me in a paper in the BRITISH MEDICAL JOURNAL (July 12th, 1919). It is humiliating and heart-breaking to ponder over the mistakes in diagnosis which came to light in the records which were considered during the preparation of that article. In many of these cases a diagnosis of gastric ulcer had been made on evidence that was considered adequate by careful practitioners. We cannot rid the matter of error until we realize how very difficult the diagnosis of gastric ulcer really is and until we decide that, no matter how confident the clinical diagnosis may be before operation, it shall not guide us during the operation too firmly. It is many years since I decided for myself that no gastric or duodenal ulcer existed unless it could be seen, felt, and demonstrated to a sceptical onlooker. It will help to a better understanding of the whole most difficult subject if in future no diagnosis of gastric ulcer is accepted, as a basis for treatment, unless the presence of the ulcer is made certain by *x*-ray examination or by operation. To accept the clinical diagnosis of gastric ulcer and to perform any operation upon the stomach without most clearly recognizing the ulcer is to court disaster. If the mistakes in diagnosis to which I have referred had been followed by medical rather than by surgical treatment, what would be the value of the experience derived from the cases in deciding upon the effect of similar treatment in veritable cases of ulcer? The truth is that we cannot state in terms of accuracy the results of medical treatment of gastric ulcer unless and until we are certain that an ulcer has been present. And as I have said the clinical evidences alone are very fallacious.

THE TREATMENT OF CHRONIC GASTRIC ULCER.

A. *Medical Treatment.*

I hope we may now agree that the results of the treatment of gastric ulcer by any of the systems already mentioned, or by any dietary or medicinal regimen, are vitiated by the lack of accuracy in the diagnosis of gastric ulcer. The most rational of all methods is that introduced by Sippy, which would appear to meet more combatantly those conditions in the stomach which we believe must be controlled before an ulcer can have the chance to heal. It is based upon a recognition of the fact that the reduction of the acid in the stomach is the first necessity. This is attained by dilution of food, alkalinization of the gastric contents every hour, and by the administration of fats.

The questions which in this connexion require answer are:

1. Does a chronic gastric ulcer ever heal under medical treatment?
2. Does it long remain healed?
3. Does it heal without producing such conditions as need surgical treatment for their relief?

1. Chronic gastric ulcers undoubtedly heal under treatment or after the exercise of continued care in diet. The scars left by their healing are seen in the *post-mortem* room and, very infrequently, in the operation theatre. The discrepancy between the reputed frequency of gastric ulcer and the scarcity of the scars found in the dead-house has not attracted adequate attention. The number of healed cicatrices found in the operation theatre, when the stomach is examined as a routine in almost all operations, is very small. This may be due to the rarity with which sound healing occurs, or to the tendency of healed ulcers to break out afresh.

2. Do ulcers when healed long remain so? In the majority of cases the answer must be No. The characteristic quality in the symptoms of gastric ulcer is recurrence. There is a succession of "attacks," of changing severity and of variable length. The tendency on the whole is towards more serious attacks with briefer intervals. It is not by any means certain that an interval in which there is freedom from suffering means that the ulcer is healed.

3. When a gastric ulcer of moderate or large size heals there is inevitably some degree of contraction. In this way hour-glass stomachs are produced, and stenosis near to the pylorus. We cannot say with what frequency the successful medical treatment of a chronic gastric ulcer produces the conditions which need surgical relief, but it is certainly not seldom, for any large scar wherever placed, and especially if it has contracted adhesions to neighbouring parts, must embarrass the action of the stomach, or cause distress after food. Notwithstanding any or all of these considerations a really serious attempt to treat all cases of chronic gastric ulcer by medical treatment should be made. It is best to have no half-measures. It is at least arguable that the necessity for surgical relief

in many patients is due to a too perfunctory trial of medical treatment in the earlier attacks. The hospital accommodation in the country is too small to allow of the poorer classes receiving the rest and supervision that is necessary. The pressure on beds is too heavy. The ideal would be to keep the patient under treatment until an *x*-ray examination showed that the ulcer was healed.

B. *Surgical Treatment.*

When a chronic gastric ulcer has refused to heal, or has recurred, after medical treatment, surgical treatment is necessary. There is not yet any close agreement as to the procedure which is best adapted to the various types of cases, and there is not yet available a full record of the after-history of large groups of cases.

The operation of gastro-enterostomy is that which has been most frequently practised. Its success at first was wonderful, probably because only the cases of obstruction were then treated. Later its results appeared to be capricious. A small number of cases did well, a larger number were not satisfactory, some of the results were bad. The operation may be supposed to have two effects: a "mechanical" one, whereby the stomach is more readily drained, and a "physiological" one, as the result of which the gastric contents are alkalinized by the escape into the stomach of the pancreatic juice and the bile.

If an ulcer lies near the pylorus, or is distal to the new opening created by the operation, the results are often good; food escapes more readily, and does not, in the same degree at least, come into contact with the ulcer; and the spasm excited by the ulcer disappears in many cases. But in some cases the ulcer will not heal, or if it heals breaks down again, and a further operation is needed. In such cases I have performed gastrectomy. In other cases the ulcer certainly becomes malignant after the lapse of two years or more. In one of my own cases, which I have formerly recorded, cancer occurred in the base of the ulcer treated by gastro enterostomy thirteen years before. Gastro-enterostomy has also succeeded in cases in which the ulcer in the body of the stomach is of moderate size, and is free from any adhesion to neighbouring parts; but in many cases it has certainly failed. That this operation alone cannot be of complete value is shown by the fact that fresh ulcers can occur in the stomach after it has been performed for duodenal ulcer. I have operated upon two such cases. At the first operation in each the stomach was healthy. In both cases the ulcer was large and well away from the anastomotic opening.

There is a general agreement among those who have written upon the subject of the treatment of gastric ulcers that an important part of every method consists in counteracting the normal or the increased acidity of the gastric juice. If this effect is necessary, then the physiological effect of gastro-enterostomy must play some part in causing the good results that do certainly follow at times upon its performance. Whether the partial or complete neutralization of the acidity is necessary to healing is, however, by no means as certain as is supposed; for in cases both of gastric and duodenal ulcer hypoacidity is sometimes found. According to Friedenwald a reduction of the acidity occurs in about one-fifth of the total number in cases of gastric ulcer, and in my experience in rather more than this proportion of cases of duodenal ulcer.

I have little faith in the "physiological" action of gastro-enterostomy. If the access of bile to the stomach with its alkalinizing properties were proved to be of any value, it would surely be better to anastomose the gall bladder to the stomach, as I have many times done in cases of carcinoma of the pancreas causing obstruction to the common duct. The entrance of bile into the stomach in these cases causes no discomfort whatever. Those surgeons who rely on gastro-enterostomy alone in the treatment of gastric ulcer usually insist upon a protracted period of dietetic restriction, of rest, and of the administration of such drugs as the "triple carbonates." I am personally averse from the performance of gastro-enterostomy except in cases of existing or threatened obstruction—that is, in cases of duodenal ulcer, or, in special circumstances only, of prepyloric ulcer. The whole matter requires fuller investigation; the effects upon the healing of the ulcer and upon the spasm of the stomach, as judged by *x* rays, must be studied and the late results of the operations carefully recorded.

Gastro enterostomy may be combined with excision of the ulcer, or its cauterization (Balfour's operation); or the ulcer may be infolded in the manner practised after perforation occurs. Excision alone I have discarded, partly because the ulcers occasionally recurred, and partly because such a deformity of the stomach followed as not seldom necessitated a short-circuiting operation. Balfour's operation has many claims to favourable consideration. It destroys the ulcer crater completely; it gets rid, therefore, of the tissues in which carcinoma begins its development; it is simple in character, involves no great handling of parts nor any exposure; it adds little or nothing to the dangers of gastro-enterostomy alone. Local recurrence of the ulcer, so far as I am aware, has not taken place.

I saw the operation performed several times in Rochester, where the results were excellent. I have, however, practised it seldom, because I have felt that in the majority of cases of gastric ulcer it was better to perform partial gastrectomy. That appears to me the only way to make sure of curing the patient. There are, unhappily, certain cases in which gastrectomy cannot possibly be done—when, for example, in a patient who is ill and feeble and a "poor surgical risk," there is a large ulcer excavating the liver or the pancreas and extending up almost to the oesophageal opening. In such a case an almost complete gastrectomy would be necessary, and a fatal result would be probable. In some such cases also Balfour's operation may be practised. My own inclination is to perform gastro-enterostomy in "Y" and at the same time to introduce a tube into the proximal limb of the "Y," and through this jejunostomy opening to feed the patient exclusively for months or years until the ulcer is shown by a radiograph to be healed. As a rule I give nothing by the mouth; but perhaps bismuth and alkalis in large doses are helpful. In one case the patient took no food or drink by the mouth for thirty-three months. In this case the ulcer was the largest I have ever seen in any specimen, and the cure has been complete and permanent.

The advantages of gastrectomy over all other operations are that it does away, so far as our experience goes, with any chance of recurrence of the ulcer, that it results in a complete and immediate freedom from all gastric troubles, and that it banishes the danger—it may be large or small, but it certainly is real—of a cancerous change taking place in the base of the chronic ulcer. In the last forty specimens removed on account of simple gastric ulceration, three showed early evidence of carcinoma. It is true that in the majority of cases an accurate discrimination between simple and malignant ulcers may be made. But no one is competent always to judge rightly; and it is safer to decide by microscopical examination in a captured specimen than to learn of a mistake from the late issue of the case.

A Clinical Lecture
ON
HYPOCHLORHYDRIA AND AIR SWALLOWING.*

BY
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IN a recent lecture I explained that for the true understanding of gastric and digestive disorders it was essential to begin their consideration from the functional side. I said that there were practically two types of functional disorder, and two only; that they were characterized by aberrations of gastric secretion, and that the chemical element at fault was the hydrochloric acid. The acid might be excessive, or it might be diminished in amount. I further explained the significance of the symptoms present in over-secretion or hyperchlorhydria; the results it often produced, such as atony, dilatation, ulceration, pyloric obstruction, and ptosis; while attached to it were such misleading terms as nervous dyspepsia, gastralgia,

* Summary of a clinical lecture delivered in the Royal Infirmary, summer term, 1919.

and such like. To-day I ask your attention to the antithesis to that condition, namely, hypochlorhydria or achèilia.

This condition is, in my experience, less common than hyperchlorhydria; at all events, I see fewer cases, which may mean that they are more commonly corrected in the early stages than is the other class. However that may be, the result of treatment based on correct diagnosis is even more dramatic in some cases, as will presently be shown. It is only necessary to recall the essential part hydrochloric acid takes in digestion as the activator of pepsinogen to realize that with an insufficient secretion the digestion of protein is delayed until the stomach contents enter the duodenum, while the physical condition in which the food has been taken into the stomach may lead to its retention until removed by vomiting. Here, as in hyperchlorhydria, the individual equation has to be reckoned with. There are individuals with limited secretion whose digestion gives no trouble so long as the amount and kind of protein food is in accordance with the quantity of acid secreted, or who avoid foods experience has taught them lead to discomfort. Milk is one of the outstanding foods which perturb the meagre secreter; it gives rise to discomfort by the slow disintegration of the casein curd. Not only this, but the milk acts as an inhibitor of acid secretion, so this additional factor has to be remembered. Some individuals, for instance, who take an ordinary meat meal with impunity get indigestion if milk is added to it, whereas the hyperchlorhydric takes the combination with impunity, and can relieve or remove discomfort by drinking some.

Clinical Investigation.

Before passing to a consideration of the symptoms I would impress upon you the importance of subjective phenomena—that is to say, the patient's history of his experiences. This history is of first-rate importance in all cases of stomach disorder, but it has to be obtained and sifted with great care. It often requires tact, judgement, and skill to get an intelligible story, and sometimes the most expert skill as a sympathetic cross-examiner will be baulked. In the great majority of cases, however, you will succeed with patience, if the questions are put with the understanding that there are the two great types of digestive disturbance.

Symptoms.

The symptoms due to hypochlorhydria vary within considerable limits, as might be anticipated, in view of the fact that they result from delay or arrest of gastric digestion and the retention of food in the stomach. The presence of food which has not effectively stimulated secretion soon gives rise to "a feeling of heaviness," or of a "load," referred to the stomach. This discomfort is not a true pain, although to begin with the patient may so describe it. Later there is a feeling of distension also referred to the stomach, and due evidently to accumulation of air or gas, the eructation of which gives temporary relief. If any other part of the stomach contents is eructated there is usually an absence of complaint of sourness or acidity. In other cases the symptom is described as "a lump" or "ball" refered to "the pit of the stomach"—that is, to the epigastrium, or to behind the sternum. The feeling of heaviness and of distension or fullness usually comes on soon after food, but in other cases it is delayed; it may last for hours, and the sense of discomfort and oppression may only get relief by vomiting. When the condition has lasted for some time the tongue becomes furred, the appetite impaired, and the bowels irregular and usually constipated. There may be vomiting after every meal, but only in severe cases. In such cases, although there is much general discomfort, want of vigour, and of interest in all things, there is not the same degree of mental and physical inability as is met with in cases of hyperchlorhydria.

Symptoms Indefinite or Delayed.

In some cases the symptoms, while definitely digestive, are very indefinite. In this respect they may be in striking contrast to those of hyperchlorhydria. The times and duration of discomfort are not only indefinite, but the patient's statements are frequently so interlarded with views and explanations that the utmost patience and tact on the part of the physician may fail to elicit a history worthy or indeed capable of record; and yet the very indefiniteness, and the entire absence of such a history as can usually be obtained from a patient suffering from hyperchlorhydria, will often lead to a provisional diagnosis of hypochlorhydria. In other instances the symptoms are delayed, or do not become intolerable until late in the day, and may continue and even become more severe after the patient has gone to bed.

The following cases, taken from many, illustrate the foregoing propositions.

Case I.

This man was in the prime of life and looked well nourished. He complained of weakness in the legs and inability to walk any considerable distance, half a mile tiring him. He also complained of discomfort after taking food, and that recently he had vomited.

Symptoms and History.—On questioning him it was ascertained that the gastric symptoms consisted of a feeling of the food he took lying as a heavy load in the stomach; this continued all day. This discomfort led him to consult a medical man of good repute living near where he was spending a holiday on account of his health. The doctor put him on "light diet." Before that his diet had consisted of porridge and milk followed by tea for breakfast; fish for mid-day dinner three days a week, lentil soup and semolina the other days; a plain tea at night. He volunteered the information that he had not taken butcher meat for six months. A week after his first visit to the doctor he vomited about 8 p.m., having only taken breakfast and dinner. The vomit consisted of the bread and milk he had taken at 1 p.m. A fortnight later he vomited four times one day, the vomit consisting of the food he had taken. At this point he was sent to see me at the infirmary. There was no history of flatulence, of eructations, or of constipation. The tongue was fairly clean and moist. He had lost 28 lb. in weight during the preceding six months. In spite of this loss he was still a big heavy man, rather soft looking, but not cachectic. Examination of the abdomen gave no evidence of gastric dilatation such as is present when there is pyloric obstruction from any cause. The stomach was indeed normal in size and position, the pylorus was not palpable, and nothing abnormal was to be felt in any part of the abdomen.

The leading points in this case were: (1) Food lying like "a load" in the stomach; (2) that he had dieted himself along certain popular lines without benefit; (3) that he had lost 2 st. in weight in six months; (4) that there had been vomiting; and (5) the absence of stomach dilatation.

The provisional diagnosis was (*a*) simple hypochlorhydria, or (*b*) malignant disease of the body of the stomach. The next step was the examination of the stomach contents. These were obtained the following morning after a test meal and showed an entire absence of free hydrochloric acid. From the history of the case the diagnosis was the former of the two alternatives. The patient got prompt and complete relief from his troubles.

Case II.

Miss M., aged 30, was sent to me with a history of headache, constipation, depression, and as a difficult neurotic. She herself dwelt much upon her digestive discomforts, and her strongly expressed opinion was that life would be quite pleasant if her digestive system could be put right. She had, as is common in digestive inefficiency, beliefs about her liver being sluggish and so forth. The symptoms, as dwelt on by her, pointed to stomach discomfort with heaviness and flatulence, which did not present the relationship to meals which hyperchlorhydria presents. The fundus of the stomach was enlarged. The next step was to get the stomach contents. A test meal was given, and showed no free hydrochloric acid. On a second occasion the stomach residuum was removed shortly before luncheon; it also showed entire absence of free acid.

This patient had been dieted on the lines commonly adopted whenever digestive trouble is complained of, but without benefit. She was now treated on the lines indicated later, and the bowels were regulated by means of a simple laxative. She improved rapidly, and lost all the neurotic manifestations which had been so pronounced. Her friends were surprised at the change in her appearance. In three weeks she left the nursing home satisfied as to the radical change in her condition. She continued to be well when last heard of.

Case III.

M. M., aged 23, from the North of Scotland, was admitted to my ward at the request of a benevolent lady on whose property the girl lived. She had been an invalid for two years, and had been kept in bed most of the time. Her own statement was that she had an "ulcerated stomach." The stomach trouble had begun two years before, with pain or discomfort after food; later she began to vomit food, and she stated that sometimes there was blood in the vomit. There had been no blood for two months. She had been treated by various doctors, and she had been in a local hospital for two months, without apparent benefit. Her domestic surroundings were good; she helped her mother with the house work, and she used to walk and cycle a good deal. She was intelligent, animated, fairly well nourished, and not anaemic. The height was 5 ft. 2 in., and the weight 8 st. 6 lb. Appetite was good, but she was afraid to eat because

of the pain which followed. She lived largely on Benger's food and Allenbury's diet, an occasional cup of tea, and some toast. The pain was referred to the epigastrium; it was constant, but worse half an hour after taking food. Vomiting usually took place when the pain was most severe, and somewhat relieved it. Lately she had vomited more, especially if she deviated from her strict dietary. The vomit came up easily, and was not preceded by nausea. She suffered from constipation, for which she took compound liquorice powder every few days.

On careful inquiry after admission, the symptoms were not definite enough to warrant a diagnosis of gastric ulcer. With symptoms of this kind associated with constipation the first procedure we adopt is to have the colon thoroughly washed out by means of a douche can. She was given light diet, consisting of fish, farinaceous foods, and milk. The stomach discomforts continued but there was no vomiting. Examination of the abdomen revealed nothing abnormal; there was no gastric dilatation or ptosis, and not a suspicion of tenderness in the caecal region.

A test meal was then given, and on removal showed entire absence of free HCl. She was at once dieted and treated as a hypochlorhydric. The sudden improvement in her condition amazed her, and in a few days her discomforts and pains had wholly disappeared. She was allowed out of bed, and rapidly regained the health and vigour she had enjoyed before her two years of invalidism. After a short stay in hospital she returned home and has continued well.

Case IV.

This case was one of special interest, as it occurred in a soldier during the war, the malady keeping him at home when he wished to be at the front. He may be designated Captain X., he was 30 years of age, and had been a civilian. The story he gave was that for years he had suffered from stomach trouble, and had to be very careful of his feeding. He had been dieted and treated by several doctors and physicians without benefit. The main symptom was discomfort and pain coming on about 10 p.m. and lasting until 2 a.m. He was fairly comfortable in the forenoon and the afternoon. There was no nausea or vomiting, but considerable gaseous eructation. The bowels were regular. He mixed up his symptoms with ideas about kinds of food, and the way in which his food was cooked. When he tried to live on army rations he got much worse, and the state of his digestion was such that he was not allowed to go overseas. He was kept at home as an instructor. He thought he suffered less when living in his own house and with his own cook to prepare his food. He complained bitterly of his condition hindering his work and limiting his activities. His bad nights made his day duties a burden which he often felt to be more than he could bear, and yet by sheer force of will he kept at it.

Examination.—He was poorly nourished, the cheeks were slightly hollowed, and there was a dusky shadow under the eyes. The abdominal wall was thin. The epigastric and abdominal reflexes were active. No peristalsis was visible. There was no tenderness on palpation in any region of the abdomen; but palpation promptly produced loud splashing over the stomach, which extended to the level of the umbilicus; its fundal end was enlarged, but the right border did not extend beyond the middle line. This was the condition three hours after the midday meal, which had consisted of cold chicken, farinaceous pudding made with milk, and a tumblerful of milk. By means of the stomach tube some ounces of stomach contents were withdrawn, which consisted of finely divided starch, curd of milk, and pieces of softened chicken; it showed complete absence of free hydrochloric acid.

Treatment.—The diet was regulated in accordance with this finding, and a prescription was given containing dilute hydrochloric acid, liquor strychninae hydrochlor., and compound infusion of gentian. This visit was on May 16th.

He came to see me again on June 1st. He looked much improved, and his own account was that the pain had disappeared, he had no discomfort after food, he was sleeping well, and was more energetic and lively. The weight was 9 st. 12 lb. He was seen two hours after his midday meal and the stomach splashed on palpation.

On June 6th I again saw him, at 1.15 p.m., before the midday meal, and found the stomach empty. His own statement was that he had not had "a touch of pain" since his first visit to me, and that he was sleeping well. On June 27th I saw him again. His weight was 10 st. 4½ lb., he was quite free of gastric or other discomfort, and was full of gratitude for increased vigour, and comfort in his work.

The history in this case pointed to hypochlorhydria, but the diagnosis from symptoms alone may be so unsatisfactory that it is unwise to be guided by them, especially as the means of attaining certainty are within easy reach when the stomach tube can be used. In this patient I used the stomach tube at our first interview, and a correct diagnosis was at once established, as malignant disease of the body of the viscus was not a reasonable proposition. The diet of white flesh, as chicken and fish, farinaceous puddings, and milk, which had been prescribed and conscientiously adhered to, under the manipulative skill of an expert cook, was departed from. The whole idea of bland and soothing nourishment was revolutionized; milk was stopped, farinaceous puddings were to be taken with stewed fruit, all kinds of flesh were allowed, but they were to be minced and eaten with stimulating condiments and sauces. Acid and strychnine were also given to help and to encourage gastric secretion. By these measures stomach function and secretion were stimulated, and the result was complete removal of the symptoms which were making work a burden and life a struggle.

Air Swallowing.

I next ask your attention to a condition I call "air swallowing," as it has important relations to the gastric disorders I have discussed with you. This is illustrated in the following records.

Case V.

Mrs. B. was sent to me by a medical friend in the city, as he feared she had some serious disease of the stomach. Her complaint was stomach discomfort and pain. When closely questioned about the "pain" we were able to get the time of onset and the kind of discomfort defined. The time of onset was immediately after eating, it occurred after every meal, and she had suffered from it for months. The kind of discomfort was ascertained by making certain suggestions to her. When asked if the pain was severe the reply was negative, and when asked if it were pain or an uncomfortable feeling of tightness she readily replied that it was a great tightness and fullness. On this definition she became quite clear and decisive. As to the duration of the feeling she thought the time varied. Asked if she brought up much *wind*, the reply was that she brought up "a lot of wind," and she was quite sure that the bringing up of the wind gave her prompt relief. In other respects the digestive system presented no abnormal symptoms; but she was emphatic as to the discomfort, anxiety, and depression the stomach condition caused. Nothing abnormal was made out on examination of the abdomen; there was no stomach enlargement or ptosis, no tenderness at the caecum or elsewhere. The abdomen was lax and easily explored.

Such were the facts obtained by a carefully elicited history and from physical examination. Note specially the onset of the symptom of "pain," which was converted into "fullness and tightness," coming on with the taking of food, increasing as food was swallowed, until eating was stopped owing to the feeling of "fullness"—no more could be swallowed. The history in this case is quite different from the history obtainable in a case of gastric ulcer, which is the only condition with which it might be confused, if the history of the symptoms were not carefully and critically examined. The statement of the onset of pain "immediately after food" and of "flatulence," must not be accepted at their bare word value; not that a patient means to mislead, but because patients do not understand the physiology of digestion and use words loosely. A history has to be sifted in the light of the knowledge of normal digestion, of the aberrations to which digestion is liable, and of the clinical knowledge we have acquired of these disorders.

The phenomena presented by this patient are not very rare, and yet they are not widely recognized. I call the condition "air swallowing," as the air is swallowed when food is taken. The amount swallowed varies in individual instances, and consequently the degree of discomfort varies. In this patient the discomfort was great, because the amount swallowed was considerable. It sometimes gives rise to visible distension; it may lead to pronounced neurosis or neurasthenia; it may act reflexly on heart and vessels, leading to functional angina pectoris. This air swallowing when food is taken is different from "air gulping" or "air sucking." Air swallowing is mainly confined to the time food is being taken, although, to a much less degree, it may be continued during the period of discomfort. The "air gulper" swallows air at any time, and it may or may not be induced by an initial stomach discomfort. In animals the condition is known as "air sucking"; it occurs in cattle and horses, and in them is a very serious condition which may cause death. It is difficult to treat, and when once acquired the habit is difficult to break.

Air-swallowing occurs in both sexes and probably in children pretty frequently. It may not only be associated with, but apparently may even be caused by, abnormal gastric secretion, abnormal in the sense of the secretion containing too much or too little hydrochloric acid—that is either hyperchlorhydria or hypochlorhydria. Although I cannot give figures, it is in my experience more common in the latter than the former. I arranged to have this patient screened in the electrical department. If she were an air swallower to a considerable extent it would be seen that, as the bismuth passed into the dependent part of the

stomach, the fundus would become large and translucent. In some cases this is very marked and gives a striking picture; in other cases it is not so striking. Dr. Hope Fowler demonstrated the appearances in this case, but they were only fairly well marked.

The next case illustrates a combination of hypochlorhydria and air swallowing persisting after removal of the appendix.

CASE VI.

Mr. W. C., aged 34, a mercantile marine officer, had been at sea for fourteen years, and consulted me on September 6th. His complaints were obstinate constipation, the bowels never moving without a purgative, and frequent, almost daily, vomiting. The vomiting had become more frequent, and sometimes occurred two or three times a day. His appendix had been removed in Bombay eighteen months before I saw him, but without any relief to his symptoms.

On questioning him it was ascertained that he had a feeling of weight and heaviness half an hour after food—"a feeling like lead" in the lower half of the abdomen. There was no pain. He often felt sick before breakfast, and if he did he might vomit a quarter of an hour to half an hour after breakfast. The vomiting occurred especially if he took anything hot, cold not being so bad in this respect. He might vomit again after the midday meal. He never vomited after 4 p.m. The vomiting was preceded by some degree of nausea, but it did not appear to be great. The motions were dry and lumpy.

Examination.—He was rather pale and flabby looking, but stout. He had never had malaria or other fever in the East. The scar of the appendix operation was good. The fundus of the stomach was enlarged. The descending and pelvic colon were felt small and contracted. The urine contained neither sugar nor albumin. The brachial systolic pressure was 135 mm. Hg. The apex of the heart was slightly to the left of its normal position. From the foregoing facts it looked as if it were only necessary to find a suitable laxative to secure the removal of the symptoms. With this object in view I prescribed a pill containing 2 grains each of extract of cascara and extract of taraxacum with ¼ grain of extract of belladonna to be taken at night.

He returned to me on September 26th, when he informed me that half a pill gave him a free motion every day, but that there was no improvement in other symptoms; that he vomited daily, sometimes two or three times; and had much flatulence after taking food, feeling "blown up" with it, and that he got relief when he got it up. From the account he gave it seemed clear that he was an air swallower. He was examined by *x* rays and watched by the screen. The screen picture was not satisfactory, but the fact of air swallowing was established by his sense of distension after the bismuth was swallowed, and by the visible and marked projection of the stomach, the projection disappearing after he belched up wind. I asked him to return to see me the following day, September 27th, and to bring his vomit for examination. On September 28th he brought me another specimen. On both occasions the vomit consisted mainly of disintegrated cereal food, some milk curd, etc. On both occasions it contained no free acid. I prescribed dilute acid, strychnine, and gentian; stopped milk and farinaceous puddings; put him on meat and fish, to be eaten with savoury sauces, and stewed fruits. He reported himself on October 2nd. He stated that the first dose of the mixture I had prescribed had relieved him, that he had no more vomiting or nausea, and practically no flatulence. He felt quite well and stated that the bowels were regulated by one-fourth of the pill I had ordered for him. He was naturally much gratified at the complete removal of symptoms, which he had suffered from more or less for the fourteen years he had been at sea. An interesting and important observation made this day was that the brachial pressure instead of being 135 mm. was only 115 mm. Hg. I saw him again on October 8th and was assured that complete relief was maintained.

Remarks.

The points of special interest in this case were (1) the air swallowing, which stopped when the hypochlorhydria was successfully treated; (2) that it was not a case of "appendicular dyspepsia," which presumably was the diagnosis which led to the removal of the appendix; and (3) the fall of 20 mm. Hg when the gastric condition was rectified.

Many years ago I published my first paper on hyperchlorhydria, and since then have lectured on it many times, and also dealt with it many times in the wards in the course of bedside teaching. This is the first time I have lectured on hypochlorhydria and air swallowing, although I have long taught these subjects in the wards; and I hope that I have aroused your interest in this other phase of gastric and digestive disturbance.

THE latest official statistics show that the total mortality from tuberculosis in Italy decreased from 1887 to 1914, but in varying degrees in different regions. On the other hand, in Sardinia it increased. For all tuberculous diseases the diminution was about one-third, but for pulmonary tuberculosis it was only one-fifth.

INDOLENT SORES ON THE FINGERS.

BY

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AN indolent sore on the finger of a nurse, a dental surgeon, or a doctor is all too often the precursor of a systemic spirochaetal infection, and, as time is a factor of paramount importance, the purpose of this note is to emphasize the necessity of having serum from such a sore examined early, and if need be often, for the micro organism of syphilis. The clinical appearances of a primary chancre at the seat of election are sufficiently well known. What is not so generally recognized is that the appearance of such a sore upon the fingers may present few if any of the accepted characteristics of a Hunterian chancre.

That unique clinical observer, Sir Jonathan Hutchinson, described the evolution of a syphilitic chancre as follows:

> If the virus of syphilis in a pure form be inoculated, it rarely produces any irritation at first. A period of from three to five weeks will elapse before anything is observed. At the end of that time a little red spot will be noticed, which itches more or less, and which, extending from day to day, soon becomes a papule, and by the end of a week or ten days is probably a little indurated disc or button. The induration is usually very marked and its margins definite.

This is an accurate description of a primary sore in the usual site on the male patient. It differs markedly, it may differ by the whole width of heaven, from the usual appearance of a chancre on the finger, which rarely shows characteristic induration. As induration has come to be regarded as the one pathognomonic clinical feature of a primary sore, the absence of that cartilaginous resilient hardness which training leads one to expect may prove misleading, and lull the sufferer, if he be a medical man, into a false sense of security. It is because of the frequent absence of this hardness that so many doctors who have unfortunately been inoculated on the finger fail to seek treatment until a general systemic invasion has occurred.

Diagnosis.

There are no definite and inseparable characteristics appertaining to a chancre on the finger. It varies according as it is due to a specific infection superadded to an already existing simple sore, or is the result of a pure infection *de novo* through an abraded epidermis, or is due to an infection coincident with the implantation of one or other of the ordinary micro-organisms of suppuration. Within the compass of such a note as this it is impossible to describe the varying evolution and appearances of a specific sore arising under these three different conditions; but in my experience the chief features of a chancre on the finger are:

1. Its indolent character.
2. Its slow but progressive increase in area.
3. Its shallowness.
4. Its scanty discharge.
5. Its comparative painlessness.
6. The early involvement of the nearest lymphatic glands.

Any one or all of these features may be masked by some coincident infection. The one constant characteristic by which it can be recognized, and ought to be recognized at an early date, is the presence, revealed by microscopical examination, of the infecting spirochaete. At this stage a blood test is of little or no avail. Indeed it may give a sense of security which the subsequent progress of the disease shatters rudely. A positive Wassermann reaction is rarely if ever given before the seventeenth day of a chancre's existence. More than once I have been assured by a medical man that the sore on his finger could not be specific, because he had had a blood test done, with a negative result, while all the time the industrious spirochaete was multiplying abundantly in the sore, and only waiting to be revealed by dark-ground illumination, or by Burri's Indian-ink method.

Tubercle of the lungs is nowadays proven early by the discovery of the tubercle bacillus in the sputum, and the examination of the sputum is a routine procedure in every suspected case. It were well if a similar routine were followed in the case of all indolent sores on the fingers. All such sores should be regarded with grave suspicion

from the first, and we should keep our suspicion alive until repeated examinations for the spirochaete have yielded a succession of negative results. Theoretically the spirochaete ought to be discoverable from the time of inoculation. Practically it is readily discovered in an untreated sore within a day or two of its appearance. Even in a sore that has been dressed constantly with antiseptics, patience and repeated examinations will sooner or later reveal it. As the time factor is of incalculable importance in the treatment of syphilis, much misery, serious ill health, and possibly tragedy, may be avoided if the diagnosis is established early.

Method of Taking Serum for Examination.

Wherever possible the serum should be taken by the pathologist who is to examine it. But if this cannot be done the procedure to be adopted is as follows:

Cleanse the sore with a pledget of wool soaked in normal saline. Then gently abrade the edge of the sore with the edge, not the point, of a bayonet-shaped needle. Rub the abraded edge briskly with a pledget of wool soaked in methylated spirit. After a short interval serum will be found exuding from the abraded surface. This serum may be wiped away, and if there is no further flow, it may be excited by a further application of spirit. This second issue of serum should be collected in capillary tubes, and sent at once to a laboratory for examination. If the report is negative, a further sample should be examined forty-eight hours later. Care should be taken to send clear serum, and not that which is copiously admixed with blood corpuscles. Three consecutive negative reports are not likely to be contradicted by the subsequent history of the case; but anything short of three negative examinations should not be regarded as sufficient to put syphilis out of court.

Cases.

I will quote three cases:

I.

A nursing sister on overseas duty in Malta developed a sore on the back of the proximal phalanx of the left thumb in the beginning of the third week of May, 1916. The sore was diagnosed as a poisoned sand-fly bite and dressed with an antiseptic dressing. She proceeded on duty to Salonica, reaching her destination on June 6th. On arrival she reported sick with a sore throat. She was isolated on the suspicion that she was suffering from diphtheria, but swabs were taken and yielded negative results both as to the presence of the Klebs-Loeffler bacillus, and the spirillum of Vincent's angina. The following week she developed an abscess in the neck in front of the sterno-mastoid on the right side. This would lead one to imagine that the mischief in her throat at this stage, if specific at all, was complicated by a mixed infection, as suppuration in the neck is an extremely rare outcome of syphilitic tonsillitis in the secondary stage. The abscess was opened on June 20th, 1916. At this time there was no eruption on her body, and, so far as she can remember, she did not call the attention of anyone at Salonica to the sore on the thumb.

At the end of June she was transferred to Malta to convalesce after the operation, and either on the voyage or immediately after her arrival in Malta she broke out in a copious eruption. This was diagnosed as multiple sand-fly bites, and was treated with zinc ointment and a tonic. She was feeling weak and ill, and on reporting this she was admitted into hospital as a case of debility due to sand-fly bites. So far as she is aware, not one of the five medical officers who saw her in Malta suspected syphilis, and she received no treatment for that disease. As she did not improve she was boarded, and sent home on six weeks' sick leave. On arriving in London she was again boarded, as is the custom in the Army Nursing Service, and at this board, for the first time, one of the medical officers suggested the possibility of syphilis. A blood test was made, and yielded a strongly positive reaction, and she came under antispecific treatment for the first time at the end of September. She has not yet recovered her full health, and her left eye is irreparably damaged. One cannot but think that the course of her illness would have been more satisfactory if the original sore on the thumb had been examined for the spirochaete in May, 1916.

II.

In the first week of June, 1919, a dental surgeon developed a small sore on the left index finger, just beyond the base of the nail. It steadily and progressively increased in size, but remained shallow, and at no stage in its evolution showed induration. The sore was carefully treated by a doctor, who very early suspected syphilis, but who hesitated to commit himself to the diagnosis of a specific infection in the absence of any induration. But as he was dissatisfied with the progress of the case he took his patient to a surgeon, who suggested that a blood test be made. Blood was taken for that purpose, but while the result was being waited for a faint macular eruption appeared on the patient's trunk, and his doctor referred him to me.

I found that he had an indolent sore a little larger than a sixpenny piece on the left index finger, general adenitis of a typical character, and a very faint roseolar rash was beginning to appear on his body. Although on clinical evidences alone there could now be no doubt as to the diagnosis, for my own satisfaction I had some of the serum from the sore examined by dark-ground illumination, and in spite of the fact that the chancre had all along been dressed with an antiseptic dressing, typical spirochaetes were found without difficulty.

III.

The third case is that of a medical man who developed an abrasion over the middle phalanx of the left little finger early in August of this year, and about the same time a second abrasion on the web between the bases of the ring and little fingers of that hand. He believes that he pricked himself with a needle in the course of an operation. However that may be, these sores were at that time, or soon afterwards, inoculated with the spirochaete, but at the same time with a somewhat virulent pus organism, probably a streptococcus, which set up violent inflammation in the finger and severe lymphangitis, which extended up to the glands in the left axilla. The mixed infection effectually masked the true nature of the condition. After some weeks of treatment the inflammation in the finger and the lymphangitis in the arm began to subside, but the sore on the finger showed no signs of healing.

On October 4th he consulted Mr. Paul, who kindly sent him to me. I found the finger greatly swollen and inflamed, the skin over it tight and glazed, and the digit presenting the appearance of an over-filled sausage. Over the middle of the second phalanx was an open sore about the size of a sixpence, shallow, definitely marginated, covered with weak-looking granulations, and with only a small quantity of discharge. No induration could be felt. Running up the forearm, and extending halfway to the elbow, was a red line of inflamed lymphatics. The epitrochlear gland and the glands in the left axilla were swollen, as were also the glands behind both sterno-mastoid muscles. In spite of the fact that the finger had been constantly dressed with antiseptics, serum taken from the abraded edge of the sore and examined by Burri's method showed many spirochaetes. Eight hours after I first saw him a roseolar eruption broke out on the body and limbs.

Here, again, valuable time had been lost, and the mischief had reached the threshold of the secondary stage before the cause was discovered. It is in the hope of making such unfortunate delays less frequent that I have written this note, and, in conclusion, I would reiterate this opinion, that a syphilitic primary sore on the finger rarely, if ever, shows "characteristic" induration, and never if it is secondarily infected. The path of wisdom is an early examination for the spirochaete.

SEVERE DERMATITIS DURING TREATMENT WITH NOVARSENOBILLON.

BY

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THE following case is instructive as an illustration of the risks attending the use of novarsenobillon:

Pte. J. M., aged 23, was admitted to New Bridge Street Military Hospital, Manchester, on July 24th, 1919, suffering from secondary syphilis; the secondary lesions were a well developed macular syphilide and general adenitis. The Wassermann reaction was strongly positive. The primary sore, contracted four months previously, had partially healed. The skin was normal and there was no history of skin disease.

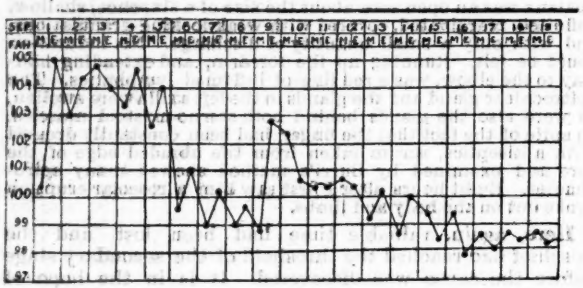
Treatment was commenced the following day, and three injections of 0.45 gram novarsenobillon intravenously and 1 grain of mercury intramuscularly were given at weekly intervals. All the injections were well tolerated; there was no reaction, and a gain in weight of 2 lb. was recorded. All primary and secondary lesions cleared up, and he was made an out-patient, the usual fortnight's rest being allowed.

On August 23rd 0.6 gram novarsenobillon and 1 grain of mercury were given. There was no immediate reaction either complained of or noted. On August 25th, two days after the last injection, he reported sick, with shivering, headache, pain in the back, and diarrhoea. The temperature was 99.2°. These symptoms continued, and on August 27th the temperature was 102.2°. Sodium salicylate and quinine were given, and by August 31st all symptoms, including the rise in temperature, had subsided and the patient was apparently well again.

On September 1st, nine days after the last injection, the temperature suddenly rose in the evening to 105°, with a return of headache and backache. The next day the temperature was 104.4°, and he was covered with "an erythematous rash of an urticarial character over the whole body" (extract from notes by M.O.). No change in rash or general condition was noted on September 3rd, and next day he was transferred to New Bridge Street Military Hospital, where and when I first saw him. The temperature was 105°, pulse 130. The tongue was coated with a thick brown fur, and there was frequent retching with vomiting of bile-stained fluid. He complained of severe headache, backache, epigastric pain, intense burning of the skin, and of feeling very ill generally. The face, neck, scalp, and forearms were thickly covered with a maculo-papular eruption,

resembling severe measles, with areas of fully developed urticaria between the macules. The backs of the wrists and hands were a mass of large discrete papules. The papules on the scalp were already pustular. The rest of the skin of the body was covered with an intense erythematous rash, scarlatiniform in character but of a darker red colour; scattered over the back and legs were islands of unaffected skin, thus differing from the uniform blush of a true scarlatina. The ears were very swollen with inflammatory oedema, and bathed with a profuse watery exudation which hung on to the lobes and helices in large drops. The conjunctivae were injected, lacrymation and photophobia being very distressing. The fauces were congested. There was a very marked general adenitis, the axillary glands being as large as pigeon's eggs and very tender. A moderate amount of albumin was present in the urine.

On September 5th the temperature was 104°, and the vomiting was relieved, but otherwise the condition was about the same. On September 6th the temperature was 101°; he was much improved, and the rash less pronounced. On September 8th the temperature was 99°; the whole face was much swollen and oedematous, the eyelids so much so that the eyes could not be opened and appeared as mere slits. The scalp was pustular. On September 9th the temperature was 102.8°, and the exudation from the face profuse; the rest of the body scaly.



On September 11th he had severe diarrhoea (ten motions during the night). The temperature was 100° F. On September 13th the face was much improved. From the rest of the body there was abundant desquamation of 'branny flakes and scales of large size, the exposed skin being smooth and pink, with the dull glazed appearance so peculiar to these cases.

On September 14th the temperature was 100°, and an extensive papulo-pustular eruption suddenly developed on the chest, abdomen, back, and forearms. This eruption was pustular at the onset. On September 16th diarrhoea was very severe (thirteen motions during the night). A small bedsore developed on the right hip, and there was inguinal adenitis. On September 24th the face was dry and scaling and the rest of the body almost clear.

A moist papular eruption appeared on the lower abdomen, but on October 8th the skin was almost clear, with the exception of the scalp, which was covered with a mass of thick dry silvery scales very difficult to remove. There was neither atrophy nor infiltration of the skin, the only remains of the dermatitis being a very faint brown pigmentation.

On October 16th yellowness of the conjunctivae was quickly followed by general icterus. The urine was acid and bile-stained, but contained no albumin. The stools were paler than normal, but not typical clay-coloured. Gastric symptoms were absent, and nothing was complained of beyond occasional headache.

The jaundice had cleared on October 28th and recovery was quite complete.

A blood test on October 8th gave a negative Wassermann reaction. In spite of the severity of his illness the patient's general condition remained good throughout; the loss of weight was ½ lb. only.

Treatment in the acute weeping stage consisted of applications of lint soaked with a lead-zinc oxide and starch lotion previously warmed; it was changed as often as the lint became dry. An ointment of similar composition was substituted when the exudation dried up; any relapse from dryness to moisture was dealt with by prompt recourse to the lotion. Daily warm baths were very soothing; sodium bicarbonate was added to the water. A mixture of potassium citrate and antimonial wine was given three times a day.

A strict diet of warm milk, milk and soda, with large quantities of barley water, was given in the acute stage. Eggs and meat extracts were avoided at all times.

The points of interest in this case appear to be:

1. The occurrence of so severe a dermatitis and toxaemia after the administration of only 1.9 grams of novarsenobillon.

2. The high temperature recorded—105° F.

3. The simultaneous occurrence of three distinct types of eruption—maculo-papular, scarlatiniform, and urticarial.

4. The marked general adenitis at the onset, present before the lesions, other than the scalp, had become pustular.

5. The negative Wassermann reaction of October 8th, that on July 24th, before treatment commenced, being strongly positive.

Colonel Harrison, Officer Commanding Rochester Row, commenting on arsenical dermatitis in general and on this case in particular, expressed the opinion that it is by no means the severity of the skin affection which determines the prognosis; his idea is that the skin is a sort of reflex of the intestinal and lung alveolar linings, and that with a mild dermatitis there may be severe internal complications with disastrous results, and vice versa. Reflecting on my own experience of past cases this conclusion seems to be very true.

I beg to thank Lieut.-Colonel Smith, R.A.M.C., Officer Commanding New Bridge Street Military Hospital, for kind permission to publish this case.

PREGNANCY COMPLICATED BY VOLVULUS OF THE SIGMOID FLEXURE, CAUSING INTESTINAL OBSTRUCTION.

BY

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THE following case is of sufficient interest to warrant publication, on account of its rarity:

The patient, aged 36, was in the thirty-seventh week of her first pregnancy. There was nothing of importance in her past history, except that she had always suffered from constipation; and nothing abnormal occurred during the pregnancy until October 16th, when the patient states that she slipped in the street, recovered herself without actually falling, had a pain in her side, and thought she had strained a muscle. Three days later she sought medical advice, as the bowels had not acted since the above incident.

Her doctor stated that when he saw her she had intermittent pain, and he therefore examined her to see if labour had started. No evidence of uterine contraction or dilatation of the cervix was found, and he treated her with aperients and enemata without, however, any result, and no flatus was passed.

Two days later my colleague, Dr. Barris, was consulted; he diagnosed intestinal obstruction, and sent her into the maternity ward, St. Bartholomew's Hospital, of which I then had charge. The patient did not look very ill; the temperature and pulse were normal and there was no vomiting. She had all the signs of pregnancy, but, in addition, the abdomen was very much distended, especially in the upper half. The whole abdomen was tender; the upper part of the uterus was to some extent obscured by the distended bowels, and the whole organ much displaced to the left. The fetus was found to be in the L.O.A. position, and no obstruction could be felt in the pelvis, either by vaginal or rectal examination. I decided to operate at once, and opened the abdomen.

A small quantity of free fluid was found, which proved to be sterile. It was quite impossible to examine the intestines before emptying the uterus, so I performed Caesarean section, and after this was complete, kept the uterus well out of the abdomen whilst examining the intestines.

The pelvic colon, the transverse colon, together with a large loop of small intestine, were found to be much distended. Further investigation showed a volvulus of the sigmoid flexure, involving also a large loop of small intestine. The volvulus consisted of one and a half twists, but was not sufficiently tight to have caused any gangrene of the intestine. After untwisting the bowel, I spent a considerable time in emptying the colon through a rectal tube, as I was very anxious not to open the bowel. By this time the anaesthetist considered the patient's condition was critical, so I closed the abdomen without anchoring the colon to the abdominal parietes. The operation lasted forty minutes. The patient and the baby made an uneventful recovery.

On looking up the literature, I find an account of 8 cases collected by Dr. Lampe, and published in the *Monatsschrift für Geburtshülfe und Gynäkologie*, vol. 29, 1909. Of these, 2 only recovered, 6 having been operated upon; the other 2 died without operation. Another case is reported by Dr. Schmidt in 1914 (*Medical Review*, Bergen), and in this case recovery took place.

THE Washington University School of Medicine, St. Louis, has been granted £30,000 by the General Education Board on condition that an equal amount is raised by subscription. This fund of £60,000 is to be applied to the endowment of the department of pharmacology.

THREE CASES OF RECONSTRUCTION OF THE THUMB.

By P. JENNER VERRALL, M.B., F.R.C.S.,
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THE following three cases illustrate some methods of replacing a lost thumb.

CASE A.

A man had had his hand crushed by a pile-driver, losing thereby the thumb at the metacarpo-phalangeal joint and the whole index with its metacarpal bone. The third metacarpo-phalangeal joint was dislocated and partially ankylosed, and the interphalangeal joints of the middle finger were acutely flexed. The first and third metacarpal bones were firmly bound together by fibrous tissue.

In this case, after turning up a dorsal skin flap, I removed all the intervening fibrous tissue, taking care to preserve part of the insertion of the opponens, and brought the flap through so as to lower the web nearly to the metacarpal base, thus converting the metacarpal into a free digit. At the same time an arthroplasty of the dislocated joint was performed, while the flexed finger joints were left undisturbed, so as to enable the finger-tip to be opposed to the short thumb. The man had good use of his reconstructed thumb. The movements of the freed metacarpal were not perfect, but he could easily hold objects between the thumb and flexed middle finger, and could oppose the thumb to meet his remaining digits.

CASE B.

Owing to the explosion of a detonator a man had lost from his right hand the thumb at the metacarpo-phalangeal joint, and the index, middle, and ring fingers through the proximal phalanx.

In this case I transplanted the remains of the index on to the thumb metacarpal by the following method: A flap was turned up exposing the head of the first metacarpal and having its base over the dorsal surface of the trapezium. From the ulnar end of this incision a racket incision was made as for amputating the index. The index metacarpal was cut at its narrowest part and the finger left attached only by the flexor and extensor tendons and the tissue surrounding the radialis indicis artery. A large hole was made in the head of the first metacarpal, reaching its medulla. By blunt dissection the cut end of the index metacarpal bone was made to emerge between the flexor and extensor structures of the first interosseous space, and by a levering movement inserted as a peg into the hole in the metacarpal. The index tendons were realigned by blunt dissection and the gap covered by a flap from the dorsum of the hand, so arranged as to reach the palm and cover the web with skin. The man has control over his transplanted index, can move the transplanted joint, and can hold a pen with ease.

Those members of the British Medical Association who visited Shepherd's Bush at the Clinical Meeting may remember this case.

CASE C.

Pte. T. had lost the thumb at the middle of the metacarpal bone, and the index and middle fingers at the metacarpo-phalangeal joint; he suffered from very severe median causalgia. An injection of 65 per cent. alcohol into the median nerve in the mid forearm cured the causalgia, but unexpectedly did not cause complete anaesthesia or paralyse the median intrinsics. Later I reconstructed the thumb by the following method: A dorsal flap was turned up exposing the whole of the first two metacarpals. An incision was then made through the whole second intermetacarpal space including the palmar skin. The stump of the first metacarpal was exposed, and its medulla opened. The index metacarpal was divided at its middle and the base excised. From the excised base a small graft was cut, and by means of this, used as an intramedullary graft, the head of the index metacarpal was fixed to the stump of the thumb metacarpal. The skin flap was placed as a web across the newly made space.

The man can now use the thumb freely and grasp a stick.

In all plastic operations on the hand the chief difficulty is the skin covering. In my opinion the available skin should be used to cover the web and the points which will have to bear pressure; all other parts, such as the dorsal surface of the thumb, being, if necessary, left to heal over, or skin-grafted, as any excessive tension seriously risks the vitality of the web.

The subsequent use of plaster splints moulded to the part serves to ensure abduction and opposition of the new thumb. These may need to be worn at night until all danger of contraction is over.

THE construction of a model leper house for Brazil, equipped with all necessary provisions for the isolation and treatment of patients, has been begun near Santo Angelo.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

ACUTE SUFFOCATIVE CATARRH.

SOME years ago I was called to a man, aged 42, who was in bed and in every detail presented the exact counterpart of the woman Dr. Robert Anderson describes in the JOURNAL of November 8th, p 597. The attack had come on suddenly a quarter of an hour before I arrived. The patient's complexion was leaden and his skin clammy. He had eaten a large meal of steak and kidney pudding about an hour and a half before. I gave him a capsule of amyl nitrite to inhale, and he died suddenly whilst doing so. Feeling convinced that the condition was due to reflex nervous action, and seeing the parallel between such an attack and those cases of asthma which follow the ingestion of certain indigestible foods, I decided that if ever I saw another case I would at once inject morphine hypodermically.

I did not expect ever to see another case, but two weeks later I was called to a man aged between 50 and 60. He was standing up fully dressed, bending over a bucket and bringing up quantities of frothy watery fluid of a mucous character, faintly tinged pink. He spoke with difficul y owing to dyspnoea and because he was entirely engaged in expectorating the fluid in gulps (I can find no other descriptive word). His pulse was full, rapid, and bounding. I at once gave him a hypodermic dose of one-third of a grain of morphine. The effect was magical. His breathing was much easier in two minutes, and he was apparently quite well within ten minutes. I then learnt from him that he had enjoyed a good dinner of liver and bacon two hours previous to the attack, and that it came on suddenly with no previous indigestion or warning. I put him to bed and he slept well, and was perfectly recovered the next day.

Both men were healthy, and had had no previous illness for some years before the attacks.

I have had no opportunity of trying morphine in another similar case. To my mind there is no alternative cause of the condition but a nervous one, and it is probably started in every case by gastric irritation. The cases are rare, but I hope morphine will soon have another and successful trial.

Kingston Hill. ARTHUR GALE.

DYSTOCIA DUE TO ANAL FISSURE.

I WAS recently sent for by a midwife on account of a "vaginal obstruction" in a somewhat delicate multipara whose previous confinements had been easy. On examining during a pain I was surprised to feel what seemed to be a horseshoe magnet of large size, with the a ch backwards, obstructing the head. When the pain passed off the "obstruction" disappeared, and there seemed no obstacle to delivery; the "obstruction" reappeared with the next pain, and I realized the condition was due to a tonic spasm of part of the anterior levator ani muscle. On further examination I found two small haemorrhoids with an irritable fissure between them. Happening to have a bottle of codrenine* with me I applied some, undiluted, to the fissure, and the effect was almost instantaneous, for with the two following pains the head was born. Next day, on pressing the fissure, sharp reflex spasm of both the rectum and vagina resulted, also of the abdominal muscles, though there was no reappearance of the "magnet."

Bath. F. C. FOSBERY.

EPITHELIOMA OF THE MOUTH IN A YOUNG PERSON.

EPITHELIOMA of the nasopharynx and contiguous parts is frequently seen between the ages of 30 and 50, but the following note records its occurrence in a lad not out of his teens.

On August 9th, 1918, M. C., aged 17 years and 11 months, consulted me regarding a swelling of the face, due, he thought, to

*Codrenine is a proprietary preparation stated (*Extra Pharmacopoeia*) to contain cocaine hydrochloride and adrenalin.

a gumboil. His complexion was sallow, and he did not appear to be strong. For eighteen months he had been working as an upholsterer and, as is usual in that trade, had been in the habit of nipping threads with his teeth as also of filling his mouth with tacks. About May 25th, 1918, the left cheek began to swell. By July 5th he felt "a kind of soreness at the top of the mouth," and while passing his fingers round he was able to remove the left upper second bicuspid tooth. Soon afterwards, in the same way he extracted the two molars on the same side.

A growth of typical epitheliomatous character was found to involve the left half of the palate with an extension to the right of the middle line. The alveolar margin from the upper second bicuspid on the left side backwards was broken down, and a probe passed into the maxillary antrum gave the sensation of having entered a rather soft mass which bled freely. The Wassermann reaction was negative.

Two pieces of the growth were removed and submitted to Dr. J. H. Teacher for microscopic examination, who reported on August 23rd that the specimen consisted of two portions of rather firm, pinkish-white tissue; both consisted almost entirely of squamous epithelioma of somewhat active-looking type, many of the cell processes being very fine and free from horny change, while others showed typical concentric cell nests.

Mr. Peter Paterson excised the left upper jaw; the diseased structures were removed as thoroughly as possible up to and including part of the floor of the orbit. The anterior ethmoidal cells, being involved, were cleared out. Subsequently, under Dr. James Riddell's direction, radium was repeatedly applied in the naris and externally below the left orbit.

The patient made a good recovery from the operation, and for some months his condition was improved, but symptoms developed gradually which indicated extension of the disease to the cerebral centres, and he died in July, 1919.

Bland-Sutton states that squamous-celled cancer has been found as early as the twenty-fifth and as late as the one hundred and third year, but the victims generally are past middle age.

In this instance the age at which the growth presented itself and the comparatively small amount of suffering are noteworthy. The irritants which acted as the exciting cause of the disease were probably conveyed by the tacks and threads which he had been in the habit of putting in his mouth when working at his trade.

P. NAPIER GRANT, M.B., C.M.,
Surgeon for Diseases of the Ear, Throat, and Nose, Out-patient Department, Royal Infirmary, Glasgow.

Reports of Societies.

THE TEACHING OF OBSTETRICS AND GYNAECOLOGY.

IN the Section of Obstetrics and Gynaecology of the Royal Society of Medicine, on December 4th, a discussion took place on the report on the teaching of obstetrics and gynaecology to medical students and graduates in London, recently made by the Committee appointed by the Section. (The report was published in the JOURNAL of September 27th and October 11th.)

Mr. J. D. MALCOLM, the President of the Section, who occupied the chair, said that in February, 1919, a committee was appointed by the Council of the Section to discuss reconstruction in the teaching of obstetrics and gynaecology to medical students, and under the able chairmanship of Dr. Eden a very great amount of work was effected. A report was handed to the Council which made it plain that some difference of opinion existed, and Dr. Eden and his colleagues were asked to obtain more uniformity of opinion. They sent in a report, which was published in the BRITISH MEDICAL JOURNAL, and also in the *Transactions* of the society. There had also been prepared a criticism, which would be read by one of the three who had drawn it up. In the meanwhile he asked Dr. Eden to make a statement.

Dr. T. W. EDEN said that, as the report had been widely distributed, he proposed to make a statement. The Committee was appointed to consider and report on the teaching of midwifery and gynaecology to medical students and graduates in London. The chief point was the teaching of midwifery, especially practical midwifery, and he did not propose to deal with the recommendations of the report with regard to gynaecology and post-graduate teaching. The training was to a large extent determined by the requirements of the examining bodies—the Society of Apothecaries, the Conjoint Board, and the M.B. examinations of the Universities of London, Oxford, and Cambridge. These all made it a central point of their requirements that the student should attend 20 cases of labour. The Conjoint Board, in insisting on these 20 cases, made it necessary that the student should be signed up for his cases by a member of the hospital staff. The Universities of Oxford and Cambridge insisted that a part should be taken in the indoor practice of the hospital. In 1906 Sir John Williams's committee of the General Medical Council made a valuable report, in which they pointed out that the recommendations of the General Medical Council were being ignored very largely by all the examining bodies, and that students were not receiving a sufficient training to equip them for practising midwifery afterwards. They laid it down as a principle that every student should for one month give his undivided attention to midwifery, either at a lying-in hospital or the midwifery ward of a general hospital. The General Medical Council watered down the recommendations a good deal. In the first place, the student might spend three months in daily—not continuous—attendance at a lying-in hospital or midwifery ward, during which he must attend 20 cases under the supervision of the staff; or he might spend one month in the hospital, and, being judged competent by a member of the staff, he might attend 20 cases in the maternity district of the hospital. Oxford and Cambridge had adopted this recommendation; all the other examining bodies had ignored it. The result was that the majority of students attended their 20 cases in the out-patient maternity district of their own hospital; so that when they began their district training they had had no experience of labour. On the district they were under the regulations of their hospital, and were supposed to be accompanied to their first case or two by the obstetric resident. Wherever possible that was carried out. Many hospitals, however, had only one obstetric resident, who could not always attend the cases, and it not infrequently happened that the student went alone. He was just as untrained in the conduct of the puerperium as in that of labour, and of course he knew nothing about infant management. It was impossible to conceive anything more unsuitable than for a student to learn the conduct of labour under the muddle, makeshift, and insanitary conditions found in the homes of the poorest classes whom the students generally attended. The student had no hospital standard by which he could correct his practice. If he was a man of great ability, perhaps he picked up a great deal, but this was not true of average men. The case of the student who went first to the maternity ward was very much better than this. Usually he spent a month there before he did his district work, and though in most of the maternity wards the student was not in residence, when he went on to the district he was in a much better position than the student who went from a hospital which had no maternity ward. Some of the hospitals were situated in neighbourhoods with only a small out-patient district. These got over their difficulty by sending their students to the lying-in hospitals. There the student could get signed up for his 20 cases in from fourteen to twenty-one days. He delivered a certain number of them himself, but more often he saw the midwife instructing a pupil midwife in delivery. The student saw a certain amount of abnormal cases, and picked up some clinical instruction, but did not actually attend anything like the 20 cases for which he was certified. This was very unsatisfactory.

There could be no doubt that the evidence all went to show that the general level of midwifery practice in the country was unsatisfactory. Mr. Bonney had put before them a great deal of evidence in May last to prove this; he brought out the point that the mortality from puerperal fever during the last twenty-five years—a time during which the mortality from wound infection following surgical operations had almost disappeared—had shown very little reduction; it had dropped from 5.8 per 1,000 to 5 per 1,000 in twenty-five years. The mortality was high from the diseases and accidents of childbirth. There had been a certain reduction here also, of about the same proportion as in puerperal fever, but between 1911 and 1915 from twelve to thirteen hundred women in the United Kingdom died in each year from puerperal infection, and, in addition, from 550 to 600 women died every year from

haemorrhage either during pregnancy or in connexion with labour. Mortality was not the only consideration; one had to remember, too, the large amount of maternal morbidity. Women suffered much from the injuries and the minor infections which followed miscarriage and labour; the hospital out-patient departments and wards were teeming with them always. The loss to the State of the earning power of women and of their activity in the home from prolonged illness after miscarriage and confinement was a serious matter, and one to be put very largely to the score of unsatisfactory midwifery. Unsatisfactory midwifery practice had its bearing on infant mortality, because the man who attended the confinement was responsible for the health of the infant during the first three or four weeks of its life, the period during which infant mortality was so high. While 40 per cent. of the confinements in the United Kingdom were attended by midwives, a great deal of responsibility for the unsatisfactory state of things rested upon practitioners also. At the same time it was not fair to blame the practitioners for the unsatisfactory results they got. Men who were taught badly could not practise well, and responsibility must be placed upon the bad system of teaching under which they had been working for so many years. It was true that obstetricians had grumbled from time to time at the blindness of their medical and surgical colleagues, but they had never made any serious effort to get things altered until now. Let them take their own share of the blame as teachers.

The evils of existing conditions were agreed upon, but differences of opinion arose as to the remedy. The members of the Teaching Committee had tried to regard the matter from the broadest possible standpoint, not only from that of education and its necessities, but also from the point of view of the needs of the public. The Committee had tried to find a solution. The first thing of which it was satisfied was this: that the evil was so great that it was no use tinkering at the present system; something must be compassed involving drastic and far-reaching changes if the position was to be put right. The first drastic change was that it would be necessary for students to devote a much larger part of their curriculum to midwifery and gynaecology than at present, and the Committee had suggested four months' continuous service as the minimum; it would like to have made it six months. The next point was that the present close association of obstetrics and gynaecology should be continued and made closer if possible. The Committee would like the men to be instructed in these two subjects together at the same time and by the same teachers. It was clear, too, that men could only be taught their practical midwifery properly in hospital. He supposed there was no single subject in the curriculum of more practical importance to a young doctor than his training in midwifery. Unfortunately, it was one of the subjects in which he was worst trained. The Committee agreed entirely with Mr. Bonney that the conduct of labour should be taught as a surgical procedure under hospital conditions with the highest possible organization of antiseptic ritual. Every student ought to have the opportunity of learning in hospital and under the eye of his teacher how to deal with all the common difficulties of midwifery. This involved a very large increase in the amount of hospital accommodation for midwifery cases; also a recasting of ideas of teaching midwifery and of the duties of teachers. Another important principle was that the training in midwifery should, if possible, be so extended as to give the student a much larger outlook on abnormal conditions in pregnancy; also that ante-natal and infant welfare clinics should be included, because they gave the student a continuous outlook upon the whole reproductive phase of a woman's life and the management of infants. The Committee, in order to find out how these requirements could be carried into effect, looked round to see if it was at all possible so to alter the present institutions as to fit them to train students upon the principles just mentioned. Was it possible so to modify the organization of lying-in hospitals that they would meet the case? They reluctantly came to the conclusion that it was not. The lying-in hospitals were badly needed for the training of midwives, and if their present facilities were taken away and given to medical students the difficulty as regards midwives would be made still greater. Was it possible by any extension of the system of the midwifery ward to meet the situation? A scheme had been sketched out by which it was thought the midwifery wards might be made to yield a much better result than at present. But in order to supply the proper number of cases, to give the student adequate experience in normal and abnormal labour, at least fifty beds were needed, and in addition the department should have at least twenty-five gynaecological beds. The students must be in residence, since one of the weak points in the present midwifery ward system was that, save in one hospital, the students were not in residence; all that happened at night they missed. The teachers would be two or three visiting physicians, and, to run the department, one senior resident about the status of the resident assistant physician, and under him a sufficient staff of resident assistants.

The advantages of such a scheme were obvious. The difficulties were these: it was only the largest hospitals that could by any possibility give up that number of beds to midwifery and gynaecology. After looking into the matter, the Committee came to the conclusion that probably not more than four out of the twelve teaching hospitals in London could provide a maternity department or clinic of that size. They suggested, therefore, that the students from hospitals unable to provide a midwifery ward of that size might attend the midwifery department of a hospital that could. They contemplated that the out-patient maternity department would remain at most hospitals whether a maternity ward was put in or not, so that the student who went to the maternity ward elsewhere might do his out-patient cases in the district of his own hospital. There were certain further objections; in order to provide training space for all the London students six of these departments would be necessary, and the number entering medicine was growing so much that probably there would have to be more. The Committee did not think that six centres such as these could ever be arranged. An enormous increase in maternity accommodation was not required in central London, but it was badly needed in the outlying parts. The cost of medical education was being met to a greater extent by Government grants, and such questions would have to be settled with the concurrence of the Ministry of Health. It was not likely that so many departments would ever be allowed under Government control or have Government assistance in central London. The Committee therefore suggested the formation of a centre—a hospital for women of a type new to London, including maternity and gynaecology. If these hospitals were placed in districts where there was no maternity service they could be made fairly large. Such hospitals were certainly needed. It was well known that it was difficult for a general practitioner to get a difficult maternity case into hospital. Hospital accommodation ought to be available for obstetric emergencies to just the same extent as it was now for surgical emergencies. Sir Arthur Newsholme's report in 1915 showed that the maternal death rate in connexion with childbirth was lowest in the districts best supplied with hospitals. Such centres, if established, should be used for educational purposes. The Committee thought that such a hospital would be best staffed in this way. The whole staff should be resident. At the head should be a director, giving nearly his full time, but in touch with general practice for a limited part of his time. Under him should be two full-time assistant directors. Such a hospital could give practical training in midwifery, both to students and to graduates in considerable numbers. He knew objections could be urged. The first was that such an institution would be isolated from the schools. He did not think this was necessarily so at all, but he would rather have men properly trained in a separate institution than badly trained within their own school. It was anticipated, however, that the medical schools which did not put in a midwifery department of their own would become affiliated to these new hospitals; hence the services of pathologist, radiologist, chemical pathologist, etc., would be available for the centre. The question of resident teachers raised another point. If they were going to demand more efficient medical practice from doctors, the demand could not be resisted that teachers should be more efficient. Therefore there would have to be a concentration of teachers as well as of clinical material.

In conclusion, Dr. Eden said they all recognized that a good deal of responsibility rested on them as teachers.

He did not think there was a great deal of difference between the Committee and its critics. The Committee had no objection to their proposals at all, except that it thought them timid. At the same time, if they were to get on rapidly there must be something like agreement, and he hoped the effect of the discussion might be to bring it nearer. Changes were coming, and it would be much better if the teachers were in a position to direct them when they came.

Dr. HERBERT SPENCER then read the criticism of the report which appeared under his own name and that of Lady Barrett and Dr. Herbert Williamson.

CRITICISM OF THE REPORT.

We endorse the sections of the report dealing with the deficiencies of the present system of education in obstetrics and gynaecology, and wish to express our indebtedness to the Committee for their clear and outspoken review. We agree fully that reforms are urgently needed, but we do not think the system proposed is the best that can be devised.

Although an intermediate phase is suggested, the ultimate goal of the Committee is a system of education based upon two essential principles:

1. The establishment of large centres devoted solely to the study of obstetrics and gynaecology, and not forming part of a general hospital and medical school.
2. That the student can only be educated efficiently when large masses of clinical material are available.

We think these two principles are wrong. We believe that the obstetric and gynaecological clinic should be part and parcel of a general hospital and medical school. These subjects are only one part of general medicine, and are intimately connected with every other branch. From the point of view both of the student's education and the advancement of the science they should be kept in the closest possible touch with other branches of medicine; the student should not be taught to regard them as something separate and distinct. There is no essential difference between puerperal infections and other wound infections; the fact that cardiac disease complicates pregnancy does not put it in a new category, nor is pyelitis of pregnancy a disease *sui generis*.

Close co-operation should exist between the gynaecologist, the pathologist, the surgeon, and the physician; such co-operation is only possible when the obstetric clinic forms part of a general hospital, both geographically and constitutionally. It is essential that the help of specialists in every branch of medicine should be available—a radiologist, a neurologist, a chemical pathologist, a physiologist, a bacteriologist, a morbid anatomist, and an ophthalmologist, to mention only a few. Consultations should be frequent, and should take place at the bedside of the patient in the presence of the student. By such consultations the student is taught the essential unity of medicine and the application of general principles to special problems. The consultants learn much from one another and the patient is benefited. This close co-operation can only be obtained within the walls of a general hospital.

We do not think very large quantities of clinical material are essential for the education of the student. The clinic need not be a large one. The minimum requirements are:

1. An out-patient pre-maternity clinic.
2. A few (say six) pre-maternity beds.
3. A lying-in ward of not less than twenty beds.
4. A few (say four) beds for septic cases.
5. An out-patient maternity district adequately supervised.
6. An infants' welfare centre—preferably a branch of the children's department.
7. A gynaecological ward of twenty-five to thirty beds with operating theatre.
8. A well-equipped clinical laboratory.
9. A room for storage and investigation of morbid anatomical material.

The staff of such a clinic should consist of:

1. Three visiting obstetricians, all of whom should teach both obstetrics and gynaecology.
2. A resident officer of the standing of a resident assistant surgeon or physician. He should hold office for a period of not less than three years, and should be responsible, under the direction of the visiting staff, for the practical instruction of the students in the lying-in ward, and should also be responsible for seeing that the pathological work of the clinic is carried out. This officer should receive a salary of not less than £500 per annum.
3. A registrar and tutor.
4. Two resident officers of the standing of house-physicians or house-surgeons.

We believe this system to offer many advantages to the student, the school, and the public over that of the whole-time officer proposed by the Committee. The system of teaching large classes of students by means of lecture demonstrations produces a practitioner inferior to the one produced by a system which aims at the instruction of the student individually by the bedside of the patient. A few cases adequately investigated and well demonstrated teach the student more than many cases hurried over.

We think it desirable that obstetrics and gynaecology should be taught as one subject, should be taught by the same teachers, and that the student's studies in the two branches should be carried on simultaneously. We think that the clinic should remain essentially a part of the general hospital, and the whole course in obstetrics and gynaecology should be taken in one school. We think that every medical school should have its own lying-in ward. At the present time this appears to be impossible in the case of some of the smaller schools, and in our opinion the deficiency would best be met by amalgamation. One or two new hospital centres in outlying parts of London might be formed in the near future by co-operation amongst themselves of the smaller teaching hospitals, and by association of their plans for expansions with State schemes of hospital provision. This would involve the sacrifice of their present central positions, and the fusing of two or more hospitals and their staffs in the creation of the new hospital. The medical school would still be retained, and its students would have the advantages of modern and efficient hospital equipment, of adequate buildings, of working in a district where the need was great, and of a consultation service with local practitioners. The funds obtained by disposal of existing hospital sites supplemented by State grants would be used for building, equipment, and endowment of the new hospital.

It is likely that under the Ministry of Health obstetric and gynaecological institutions will be established in outlying districts of London, probably as parts of new general hospitals. If these institutions are staffed on the principle suggested by the Committee they will form centres for research and post-graduate work. Such institutions will be of the greatest value and are urgently needed.

We think that the director of clinic of these new institutions should hold office in most cases for a limited term of years, and on his resignation of the post be eligible for the staff of the hospitals with medical schools. The experience and skill he gained as director would then become available for the general public and for the education of medical students.

Dr. SPENCER wished to add a few remarks on his own behalf. He agreed with many of the points in the Committee's report, and he thought it most important that they should all be unanimous in insisting upon the need of more beds for gynaecology and midwifery, and of more time to be devoted by students to these subjects. Obstetrics and gynaecology should be taught by the same teacher, but he disagreed on the question of the association of the general hospital. On the question of teaching students, he did not think the senior teachers had had quite sufficient credit given to them in the past for what they had done in the way of teaching. He did not know how these centres were going to get their material if the general hospitals maintained their outdoor maternities as at present. One other point related to the director. He read the passages in the report with regard to this proposal, and noted that this director would be of the status of an obstetric physician at the teaching hospital, responsible for the control of the work of the institution generally, and taking a large share in operative work, in teaching, and in research. The director was not to be a whole-time officer, but to remain in touch with consulting practice. This was a great deal to require of a resident director. The organization under this director seemed to suggest a German method of getting control of the machine and of the work of individuals which was contrary to the ideas of liberty which British subjects cherished. It had been always the glory of the British teacher that he was independent. Dr. Spencer objected, therefore, very strongly to the control by the director over the teacher's work.

(To be concluded.)

SURGERY OF THE PITUITARY GLAND.

AT a meeting of the Section of Surgery of the Royal Society of Medicine held on December 3rd, the President, Sir JOHN BLAND-SUTTON, being in the chair, Mr. PERCY SARGENT read a paper on the surgery of the pituitary gland, in which he suggested for discussion a certain number of points connected with the surgical aspects of the diseased gland. He realized how much had yet to be learnt before operative treatment of pituitary lesions could be established upon a firm basis. Disease of the gland might manifest itself in many different ways, and the patient might be brought in the first place to the ophthalmic surgeon, the physician, the pediatrist, the neurologist, or the gynaecologist. Lesions of or implicating the pituitary gland gave rise to symptoms which fell into three groups: (1) Those dependent upon disordered function, whether in the direction of excessive or of deficient activity, or of a combination of both; (2) those which resulted from an increase of the general intracranial pressure, and (3) those due to pressure upon neighbouring structures, particularly the optic chiasma. Tumours which caused pituitary symptoms did not necessarily arise in the gland; interpeduncular tumours, frontal lobe tumours, and growths involving the base of the skull might cause pressure upon it and the surrounding structures, whilst symptoms due to disordered pituitary function were also met with in hydrocephalus. He dealt first with the question as to what effects upon the symptoms of pituitary disease were to be expected from operative treatment, and secondly, what was the best method of attack.

Symptoms.

It was now commonly believed that gigantism and acromegaly were manifestations of excessive activity of the pituitary gland, whilst infantilism, adiposity, and impotence resulted from deficient activity, and that there was thus an analogy with the corresponding disorders of the thyroid gland. In both cases the symptoms of excessive or deficient functional activity might merge into one another. Further, both thyroid and pituitary tumours caused symptoms due to pressure upon neighbouring structures. He was unable to express an opinion as to whether or not an operation for glandular symptoms alone was justifiable. Cushing had related two cases in which he operated on account of glandular symptoms and headache. In one case there was immediate cessation of the headaches, and later a marked change in the patient's appearance. In the other a subtemporal decompression afforded no relief of headache, but later some improvement was noted after a course of whole-gland extract to the extent of 100 grains a day. In a third case the predominating signs were those of deficient glandular activity. Treatment by glandular feeding was carried out for a time with some slight improvement, but later the headaches became more severe and the vision began to fail. A sellar decompression was then done, with prompt cessation of the headache. The speaker himself would hesitate greatly before attempting the experiment in a patient with little or no enlargement of the sella, in whom neither headache of any severity nor neighbourhood symptoms existed. In the opposite class, with a large sella easily accessible through the nose, and with a progressive Fröhlich syndrome, the operation might be more readily undertaken. It was possible that the relief of pressure upon any remaining normal gland tissue afforded by the emptying of a cyst, the removal of a mass of adenomatous tissue, or by merely incising the dural capsule, might be beneficial. The onset of general pressure symptoms marked the beginning of the terminal stage. A simple decompression operation would abolish the headache due to general intracranial pressure, but could not be reckoned upon to relieve the "bursting" frontal pain due to sellar distension. In those cases which showed papilloedema subsidence of the swelling was to be expected after decompression. It was probable that a simple decompression operation would prove a useful if not an essential preliminary measure before making an attack upon a pituitary tumour. It was chiefly for visual disturbances that the pituitary region had hitherto been subjected to surgical interference. According to Cope, operation or *post-mortem* examination on cases of this description revealed a large intracranial extension, and he concluded that all pituitary tumours which came to operation for symptoms other than acromegaly had long before burst the bounds of the fossa.

Nature of Pituitary Tumours.

The majority of the tumours which arose in or primarily involved the pituitary gland appeared to be of an adenomatous character, and were called by Cushing "chromophobe struma"—that is to say, an adenomatous hyperplasia characterized by deficiency or absence of the eosinophile granules, which seemed to be associated with functional activity. In three series of cases quoted 62 per cent. of the tumours subjected to operation were of an adenomatous nature. Another kind of tumour, not arising in but secondarily affecting the gland, was the suprapituitary endothelioma. Although he thought it was impossible to extirpate a solid pituitary tumour completely (so far any removal that had been accomplished had been only partial), nevertheless a sufficiently large part of such a tumour could be removed to afford some relief, at any rate for a time.

Methods of Approach.

These fell into two groups—the *extradural*, including transpalatal, nasal, and paranasal operations; and the *intradural*, comprising the temporal and frontal. At present the two methods of approach which held the field were the nasal and the frontal. Of the former the transsphenoidal operation of Cushing was probably the best; of the latter, the orbito-frontal operation of Frazier might be taken as the type. Although rival methods, neither should be altogether rejected. In time it might be possible to make a sufficiently accurate diagnosis to enable one or other to be selected for any individual case. Mr. Sargent then described Cushing's nasal operation and that of the frontal route, and related his own experience of 14 cases on which he had operated, 6 of them by the nasal route and 7 by the frontal route. In attempting to make a fair comparison between the two methods, he said that not only the route of approach, but also what could be accomplished when the objective had been reached should be considered. The nasal route presented several disadvantages. It was narrow and unclean, and the difficulties might be increased by acromegalic deformity of the bones. Even in the most favourable circumstances very little room could be obtained for dealing with a solid tumour, and when (as was always the case when chiasmal pressure was present) there was an intracranial extension, it was only the smallest part of the tumour which could be attacked. The relief afforded by removing this part of the mass, or even by evacuating the contents of a cyst, was small and transient. On the other hand, the frontal operation was free from risk of meningeal infection, and allowed the intracranial part of the tumour to be inspected and dealt with. Its chief dangers were that the frontal lobe might be injured, and that serious or even fatal haemorrhage might occur. The latter depended upon the fact that the circle of Willis was stretched out around the tumour, and so might easily be damaged. If these dangers could be avoided, a much more radical and efficient operation could be accomplished. From his own experience and from a study of the literature on the subject, he had come to the conclusion that the beneficial effects upon vision of partial removal of a pituitary tumour through the nose, or of merely allowing it to bulge downwards into the sphenoidal sinus, were uncertain, inadequate, and transitory. The effect upon severe headache due to sellar distension was more uniform, and might be very striking, but there was a tendency to recurrence. Of the effect upon glandular symptoms it was less easy to form an estimate, the more so as practically all the cases were treated at the same time with large doses of pituitary gland extract. Until some medicinal form of treatment had been devised which was capable of arresting the growth of such a common variety of pituitary enlargement as the adenomatous hyperplastic tumour, it was to surgical treatment that we had to look for the relief of symptoms due to tumours of or in the neighbourhood of the pituitary gland. He urged that if surgical treatment was to be given a fair field it should be applied at an early stage, and not merely as a last resort in cases rapidly advancing towards a fatal termination. The existence of a high degree of intracranial pressure due to the invasion of the cranium undoubtedly increased the risks of a surgical attack upon the pituitary tumour, just as in all other cases of cerebral tumour. He looked

forward to the time when headache, vomiting, and papilloedema would no longer be regarded as symptoms of cerebral tumour, to be expected and awaited before operation was proposed, but as signs of impending disaster in neglected cases. There was no reason why pituitary tumours should not be diagnosed at a very early stage, for with them we had many sources of information in radiography, examination of the visual fields and optic discs, and all the symptoms which might be due to abnormalities in the glandular function. Whatever advance in pituitary surgery might take place in the future it was to be looked for mainly in three directions—first, in earlier and more accurate diagnosis; secondly, in a better understanding of the objective to be aimed at in every individual case, so that the most suitable surgical procedure might be selected; and, thirdly, in the improvement in the technique of the intracranial operation.

Dr. HOWARD TOOTH spoke from the point of view of the physician. He had been anxious to find some evidence as to whether the expectation of life were better with operation or if the pituitary tumour were left alone. He had traced seven cases, and found that the average time which had elapsed since the appearance of the first symptom was 7.5 years. The survival period of operation cases was 5.13 years. The symptom above others which called for operation was severe and recurrent headache. He described cases in which headache and polyuria had been relieved.

Mr. V. Z. COPE described a case to illustrate the difficulties in diagnosis. There was a large tumour with erosion of the sella turcica. Temporal decompression was done, and a large tumour of the lateral ventricle was found which was pressing upon the pituitary gland. He thought that the surgical outlook was not quite so bad as the last speaker had indicated. Much could be done to relieve the blindness. He spoke of a case of increasing blindness in a dancer; after operation the vision improved and giddiness was so much relieved that the man was able to return to his calling.

Mr. J. HERBERT FISHER said that it was impossible to decide by ophthalmoscopic examination when recovery of the optic nerve could take place. Even with advanced atrophy and with poor vision recovery of function might follow. Speaking of organotherapy, he related a case which had been treated by administering thyroid, in which the visual field and direct vision had much improved, although later the vision had again deteriorated. In another case administration of thyroid and pituitary extract had led to decided improvement. In cystic cases there were usually adenomata as well. The solid growth was probably progressive.

Mr. F. R. B. ATKINSON said that few cases of acromegaly, due to adenoma, had been operated upon, yet in this condition the expectation of life was good. Most of the patients operated upon had died; in a few the general condition had improved though the extremities had not become smaller.

Mr. W. G. HOWARTH thought that there was something to be said for the trans-sphenoidal route. It was simple and gave a wider view than Mr. Sargent would suggest. Another advantage was that if the tumour proved to be malignant it was possible to insert radium afterwards. If cases were seen early it was useful as a preliminary to more severe operations.

Mr. E. D. D. DAVIS thought that the trans-sphenoidal route was unsatisfactory. The opening was small, and there was a danger of entering the anterior fossa.

Mr. SARGENT, in reply, agreed that in some cases the headache was of a most distressing character, and something had to be done to relieve the patient. If ophthalmologists could give the surgeon some indication as to the prospects of return of vision, it would be easier to decide upon the value of operation. The cases which improved under glandular treatment were those with underactivity, for this could be compensated for by oral or hypodermic administration.

TYPHUS AND RELAPSING FEVER IN SERBIA.

AT a meeting, on November 28th, of the Section of Epidemiology and State Medicine of the Royal Society of Medicine, with the President, Dr. E. W. GOODALL, in the chair, Colonel WILLIAM HUNTER, C.B., A.M.S., read a paper on the Serbian epidemics of typhus and relapsing fever in 1915: their origin, course, and preventive measures employed for their arrest.

The principal data analysed by Colonel Hunter consisted of returns of cases in hospitals in forty-two towns of Serbia, and more detailed information respecting patients in the central military hospital and seven reserve hospitals of Kragujevatz. The first and worst seat of the outbreak was Valyevo, a small town near the Bosnian frontier, where the disease broke out after the second Serbian advance; when the town was evacuated for sanitary reasons large numbers of Austrian prisoners were distributed throughout the country. Cases of typhus and relapsing fever in the hospitals increased rapidly from 2,400 on January 2nd, 1915, to 6,500 by February 1st, 11,500 on March 3rd, and 16,700 on April 2nd. At the time of arrival of the British Mission, conditions were appalling; the sanitary circumstances were terrible and the fatality of the disease reached 40 per cent. The sanitary measures taken by the British Mission consisted in (*a*) suspension of railway traffic, (*b*) stoppage of leave from the army, (*c*) establishment of Mladenovac quarantine and cleansing station, (*d*) formation of sanitary disinfecting train, (*e*) introduction of "barrel disinfector," (*f*) introduction of railway van disinfectors, (*g*) introduction of railway van douche baths, (*h*) cleansing of railway stations and rolling stock. The first wide measure of prevention placed in the foreground of the programme was suspension of railway traffic and stoppage of army leave. The particular area selected lay between the first army area and the rest of Serbia, and a large quarantine and disinfecting station was established at Mladenovac, situated at the junction of two army areas, in order to shut off the first army area (heavily infected) from the adjacent area, and to prevent the southward extension of infection from either. It was hoped to get this station into working order before railway traffic was resumed, but actually, owing to local difficulties, traffic was resumed some days before the station operated. The consequence was a recrudescence of disease, which had abated when the traffic ceased, but by great efforts the station was brought into full work on May 3rd. The epidemic declined suddenly on March 16th, following the administrative measures brought into force within ten days of the arrival of the British Mission, and this mitigation continued for six weeks—that is, during the month of railway suspension, and ten days longer. A recrudescence set in ten to twelve days after traffic was resumed. This was clearly related to movements of troops and civilians occurring in areas and places chiefly affected by such movements. The whole experience pointed to the importance of such definite administrative measures affecting the country as a whole, in arresting epidemics of this kind, in addition to and far more effective than the usual measures adopted locally in individual towns or hospitals for the prevention of the spread of these diseases. Some indication of the effects is given by the statistics of the Kragujevatz fever hospital. The number of cases admitted in January had been 118, in February 961, in March 1,138. The fatality was 30 per cent. in January and February, 40 per cent. in March. In April the admissions fell to 360 and in May to 200.

Colonel HUNTER exhibited a large number of instructive charts and statistical tables.

In the ensuing discussion Lieut.-Colonel STAMMERS, Dr. HAIG, Dr. MOON, and Dr. MCVAIL took part.

X RAYS IN ABDOMINAL DIAGNOSIS.

THE second sessional meeting of the East York Division of the British Medical Association was held in the board room of the Royal Infirmary, Hull, on November 7th, with Dr. EDWARD TURTON in the chair. Mr. E. H. HOWLETT, F.R.C.S., spoke on "The *x*-ray abdomen." He began with a plea for close intercommunication between the physician, surgeon, and radiographer. The two methods employed in the *x*-ray examination of a case were: (1) Screen, (2) plating. The latter required very good apparatus and a lavish expenditure of plates; for this reason the lecturer confined himself to a description of the screen work. Radiographic examination of the abdomen had been made possible by the employment of the opaque meal, using bismuth carbonate, or oxychloride or sulphate of barium, the latter being largely employed owing to its comparative

cheapness. The lecturer said that he followed in Haudek's footsteps, with a slight alteration in the method of administration. Haudek used a thin medium as the filling test, which was given at the first examination after the opaque meal administered six hours previously. The condition of the stomach and situation of the meal was first observed; next, the tube still running, the thin filling meal was given. It could be watched whilst being swallowed, and various observations made. The tube was then stopped and a further opaque meal given. The stomach could now be examined at leisure.

The normal stomach was next described, with its departures in the way of hypotonicity or hypertonicity and atony. The position, mobility, flexibility, peristalsis, and motility of the normal stomach must be known, so that its departures in disease could be recognized. Gastro-spasm was next dealt with, and the confusion that it might cause in the reading of the screen picture. Mr. Howlett then spoke of the great utility of the *x*-ray examination; as a method of diagnosis it was second only to the hand and eye of the surgeon. Cancer of the stomach, ulcer, duodenal ulcer, were described and their differences pointed out, emphasis being laid on the power to distinguish between gastric and duodenal ulceration. The passage of the meal through the intestines was described, and the method of using an opaque enema in place of, or in conjunction with, a meal by the mouth, in cases in which the larger haustrated bowel was under suspicion. With regard to affections of the gall bladder the presence of a calculus holding lime salts was possible of detection; it was necessary to differentiate between a renal calculus and a gall stone. In attempting the diagnosis of gall bladder troubles, plating was to be preferred to the screen, but numerous plates frequently had to be employed.

The CHAIRMAN offered his congratulations, and proposed a hearty vote of thanks to Mr. Howlett for his very instructive lecture, remarking that in all cases *x* ray reports were of the greatest value. He suggested that doses of belladonna might be given as a routine method to get rid of gastro-spasm prior to screening.

Mr. UPCOTT, Dr. DENYER, Dr. HARRISON, and Mr. BERTRAM BLAIR also took part in the discussion, and Mr. HOWLETT replied.

RUPTURED AORTA.

AT the November meeting of the Cardiff Medical Society Dr. IVOR J. DAVIES read a preliminary note on a case of ruptured aorta, with haemopericardium, causing sudden death. A colliery repairer, aged 52, previously healthy, was found dead beside a truck of pit props (pine wood) which he was unloading alone; he had been seen five minutes previously actively at work. One of these heavy props was lying across his chest. On examination there were severe contusions in the entire extent of the soft parts over the ascending aorta; they were strictly limited to this situation. The pericardium, of normal capacity, was full of blood and clot. The aorta in its intrapericardial portion, and immediately above the sigmoid area, showed a transverse clean rent, involving two-thirds of the circumference. The cut edges of intima were sharp and were retracted slightly over the whole area of rupture. There was a linear vertical crack in the intima extending upwards for 1½ in. from the posterior extremity of complete rupture, and a smaller lesion was seen in the endothelium of the posterior sinus of Valsalva. The aorta in its entire extent did not present any evidence of disease. The heart was somewhat fatty and flabby, but otherwise healthy. The kidneys showed early granular changes. All the other organs were healthy. The opinion was expressed that the man received a heavy blow over the ascending aorta from one of the pit props slipping end-on towards him.

Dr. HERBERT T. EVANS showed a case of chronic progressive paralysis of the cranial nuclei of nine months' duration. It began with ptosis of the left eyelid and diplopia, followed by strabismus, and subsequently by ophthalmoplegia externa of both eyes, and finally complete ophthalmoplegia of both eyes. During the last three months the soft palate became paralysed, and in addition to the nasal voice the articulation had become defective, while deafness had set in. So far the tongue showed no sign of wasting, and no changes had been noted in the discs or elsewhere.

Dr. LEIGHTON DAVIES showed a case of double microphthalmia in a boy of 6 years of age. Both eyes were undersized, the left being the smaller. In each eye there was an incomplete coloboma of the iris down and slightly in, together with a coloboma of the choroid, very extensive in the left eye, less so in the right. There was no coloboma of either lens. Dr. Leighton Davies also exhibited a specimen of bisected buphthalmic eye. The condition was shown to be entirely different in its pathogenesis from microphthalmos, as buphthalmos was always due to definite pathological changes associated with permanent or transient rise of intraocular tension—that is, glaucoma. Such eyes were always more or less blind, whereas microphthalmia might be associated with useful vision.

Mr. B. K. T. COLLINS contributed notes of a case of multiple fibromyomata of uterus with double haematosalpinx and double cystic ovaries removed by supravaginal hysterectomy; and gynaecological specimens were shown and discussed by Dr. EWEN MACLEAN and Mr. E. T. COLLINS.

GASTRIC ULCER.

AT a meeting of the Leeds and West Riding Medico-Chirurgical Society, held at the Leeds General Infirmary on November 28th, Mr. E. R. FLINT contributed a paper on gastric ulcer, its clinical and surgical aspects. After dealing with the symptomatology of chronic and recurring gastric ulcer, and the recent experimental work which has been undertaken to determine its causation, Mr. Flint reviewed the various operative procedures which have been adopted for its treatment. He strongly advocated partial gastrectomy as the ideal procedure for chronic ulcers at the pylorus or on the lesser curvature, and the results in over forty cases in which he had performed the operation added much weight to his contention.

Mr. H. B. SCARGILL exhibited a number of slides illustrating the *x*-ray diagnosis of gastric ulcer and the specimens subsequently removed by operation which confirmed the diagnosis. An interesting discussion followed.

Among the cases and specimens exhibited at the meeting Sir BERKELEY MOYNIHAN showed a specimen of three-quarters of the stomach with attached portion of jejunum including a gastro-enterostomy opening. The patient, a woman aged 38, suffered from the perforation of a gastric ulcer on May 17th, 1903, and a perforation of a second ulcer on May 30th, 1904; at the second operation a gastro-enterostomy was performed. Perforation of a third gastric ulcer occurred on October 14th, 1914. Symptoms recurred, and on November 2nd, 1919, a further operation was performed; a jejunal ulcer was found. The stomach, with the scars of the three ulcers and the jejunum attached to it, was successfully removed.

Mr. HARRY LEE exhibited a series of water-colour drawings of the fundus oculi, showing injuries and abnormalities met with during the war; and Dr. MAXWELL TELLING and Professor STEWART showed specimens from a case of endothelioma of the dura mater.

Reviews.

INJURIES OF THE BLOOD VESSELS.

SIR GEORGE HENRY MAKINS'S monograph *On Gunshot Injuries of the Blood Vessels*,[1] founded upon his unrivalled experience and following on his well-known earlier contributions to the subject, will certainly be read with all the interest it deserves. It is not a very easy book to assimilate; even experience can hardly stem the infinite variety of these lesions. It is not that the characters of the initial hurts cannot be discriminated and classified, but that the consequent changes and developments, in their permutations and combinations, have lapse of time to complicate the issues. Fortunately, the end-results form a fairly simple series, but the author is diffident of dogmatism, and the data of the intermediate stages are necessarily less ample; it is probably for this reason that very close attention is needed for full appreciation of the argument.

Briefly summarized, the results of war experience are a more accurate knowledge of the signs of injury to arteries; of the mode of development of their consequences; of the effect of obliteration of main vessels upon the vitality of the parts supplied; of the arrangement of the vessels in relation to the various forms of traumatic aneurysm; and of the advantages of suture of vessels.

[1] *On Gunshot Injuries of the Blood Vessels.* By Sir George Henry Makins, G.C.M.G., C.B., F.R.C.S. Bristol: Wright and Sons, Ltd. 1919. (Super roy. 8vo, pp. xii + 251; 60 figures, 4 plates. 21s. net.)

The facts obtained by examination of the peripheral vascular system, by auscultation, and the estimation of blood pressure, their bearing upon and relation to precordial signs, and vasomotor and other neural disturbance, can now be interpreted with more exact reference to the vascular lesion. There is an interesting analysis of various views upon the parts played by ischaemia and neural injury in the production of disorders of function and physical state in the limbs, which suggests that light may be thrown upon similar conditions of quite other origin, but of importance to the community, in reference to industrial incompetence.

The discussion of the mode of conduction of vascular murmurs is not very satisfying, and, indeed, not quite consistent from chapter to chapter, but this is a small matter. Statistics throughout are given with strict reservations and there is, quite properly, no attempt to force deductions from them. The author is of opinion that anaemic gangrene following ligation is more common than was formerly thought. Histological studies prove very interesting, the most important result being the demonstration of the much wider distribution of tissue damage than inspection would suggest.

Immediate transfusion of blood is recommended as the correct treatment of secondary haemorrhage, but its efficacy in the presence of profound septic intoxication is admitted to be doubtful. The mode of formation of the definitive sac by hollowing out of the primary clot, and the tenuity of the original connexion between the "sac" and the wound in the artery, are interesting observations, as also is the frequency with which the aneurysm itself escapes infection, even when the clot and surrounding tissues are suppurating. In "mixed" injuries the sac is always arterial; the relations of the sac or sacs to artery and vein are now more clearly known, and it is established that arterio-venous aneurysm does not result from complete severance of the vessels. Spontaneous healing of varix, and, in general, cicatrization of untreated vascular wounds, is more clearly proved.

Sir George Makins finds his earlier advice, as to simultaneous ligation of the main vein when tying the artery, confirmed. He discusses at some length the present position of suture of arteries, pointing out that the actual manipulations are not so difficult as is generally supposed, and showing that, notwithstanding final occlusion of the sutured vessel, it is often justified by the postponement of arrest of the chief supply until the collateral circulation is improved. He names the common carotid, the external iliac, and the common femoral as the arteries demanding suture. He commends the use of Tuffier's tubes for reasons similar to those which lead him to advocate suture.

Rather more than half the book is devoted to the study of lesions of individual arteries; it is instructive and of great value for reference. The whole work will doubtless be the foundation of the textbook articles on the subject for years to come.

RADIO-DIAGNOSIS OF CHEST DISEASES.

DR. HONEIJ'S translation of Dr. F. BARJON'S book on the *Radio-Diagnosis of Pleuro-Pulmonary Affections*[2] should prove of value to radiologists and physicians alike. It is written by a physician who is an accomplished radiologist, and the subject is discussed in all its bearings from the points of view of the *x*-ray findings and of the physical signs, and the deductions to be made from the combination of the two. With few exceptions all the conditions—those of everyday work and those of rare occurrence—are discussed; perhaps one of the most notable exceptions is that of the lung conditions due to various industrial employments, of which the author does not appear to have had any personal *x*-ray experience. His general attitude towards *x* rays can be deduced from the conclusions he reaches after describing the examination of a normal thorax; after discussing the main facts he says:

> Radiography shows only the shadows and light areas which constitute normal and abnormal shadows. All deductions useful in medicine are based on the analysis of these shadows. It cannot be repeated too often that final and complete diagnosis should not be demanded of radiography. That is not within its province; that whilst the radiographic examination can throw great light on difficult problems, the physician must make the final diagnosis.

Admitting the dramatic, unexpected, and final diagnoses not unfrequently made by an *x*-ray examination alone, these conclusions are in the main perfectly true. One of the most interesting parts of the book is that on collections of fluid, localized or otherwise, in the pleural cavity, together with the diagnosis, and the *x*-ray signs, of fluid in the interlobar spaces and in the lung roots. Few radiologists would be daring enough to rely solely on the *x*-ray signs described to make the diagnosis upon which the author ventures when he, with his knowledge of the history and the physical signs, is able to fit the puzzle together and give the true value to all the varying signs. Especially is this the case in the diagnosis of pleurisy of the region of the hilus.

When discussing the production of artificial pneumothorax for the cure of phthisis, it is said that the advice a radiologist must give is of paramount importance, first, from the point of view of the extent of the lesions—whether they are unilateral or bilateral—and secondly, by showing the topography of the pulmonary lesions and furnishing an indication of the probable location of adhesions and their extent. Great stress is laid on the point that after an attempt at an artificial pneumothorax another radioscopic examination is necessary to show whether the attempt has been successful, and whether the treatment ought to be followed up or abandoned. It is laid down very emphatically that the most important part of radiology in this work is the discrimination between those cases in which it should be followed up and those in which it should be abandoned. No other method of examination for the selection of cases is so decisive.

The book opens, after an introduction, with a short account of the methods of examination, and the author deals next with the radiological study of the pleurae; there are chapters on pleurisy of the large cavity, circumscribed and encysted pleurisy, and pneumothorax. This is followed by a study of the bronchi in three chapters—on foreign bodies, on bronchial affections, and on tracheo-bronchial adenopathy respectively. In the section on the lungs we find chapters on vascular processes, acute infectious pulmonary processes, pulmonary tuberculosis, and lung tumours. Finally, penetrating wounds of the thorax caused by war projectiles are discussed. There are numerous illustrations, both typical radiographs and diagrams. Great stress is laid upon the importance of accuracy in screen examinations, and the screen appearances are described in considerable detail, the points to be looked for being plainly indicated. The translation from the original French has evidently been done with care and accuracy, and it is easy to read and understand. This is the best monograph yet published on pleuritic and pulmonary affections as approached from the *x*-ray standpoint; and without any desire to suggest that it is not suitable for others, there is no doubt but that it should be read by all radiologists, and by all physicians who specialize on the diseases of the chest.

A NEW INTRODUCTION TO PHYSIOLOGY.

THE *Introduction to General Physiology*,[3] by Professor BAYLISS, strikes an entirely new and refreshing note. In the past the great majority of the smaller books were merely boiled-down textbooks, accurate and useful enough, but rarely stimulating. Professor Bayliss might well have called his small volume an introduction to physiology for professional physiologists, as the scope is wide and the exposition clear. Indeed the book will probably be of greater value to the trained student, affording as it does a conspectus of the whole field, than to the student who is just beginning his studies.

It goes without saying that most teachers have their own ideas as to the nature of the material to be included in an elementary volume; they gauge their probable audience in the light of their own experience and of the parts of the subject they consider most material. Naturally, in the present volume great attention is given—perhaps,

[2] *Radio-Diagnosis of Pleuro-Pulmonary Affections.* By Dr. F. Barjon (of Lyons), translated by Dr. Honeij (Yale Medical School). New Haven, U.S.A.: Yale University Press; London: Humphrey Milford, Oxford University Press. 1918. Original French, 1916. (Med. 8vo, pp. xix + 183; 79 figures. 10s. 6d. net.)

[3] *An Introduction to General Physiology.* With practical exercises. By Professor W. M. Bayliss, M.A., D.Sc., F.R.S. London: Longmans, Green, and Co. 1919. (Demy 8vo, pp. xv + 238; 20 figures. 7s. 6d. net.)

considering the modern lines of attack, rightly given—to the consideration of the physico-chemical aspects of physiology and for the most part in simple language. On the other hand—and this is probably due to his own personal experience of students—there are sections in which the most elementary knowledge, knowledge which the average medical student at least ought to have acquired from his botanical and zoological studies, is assumed to be absent.

As regards the matter of the book the text (Part I) is divided into seven chapters headed as follows: Life and Energy; Food—Digestion and Respiration; Work—the muscles; Stimulation—the senses; Adjustment—the nervous system; Transport of Materials—the vascular system; and Growth and Reproduction. Part II is concerned entirely with the experimental work to which allusion has been made in the text. It ranges over a very wide field, illustrating all phases of physiological research. A great deal of the work can be done with a very small outfit, although naturally some experiments are described which require equipment not to be found in every laboratory. A magnificent practical course to replace the current "frog jumping," a course which would be of genuine value to the medical student, could be evolved by using this book and Professor Sherrington's recent publication, *Mammalian Physiology*, as the basis.

The time has surely come when it is advisable, if not indeed necessary, for the various universities to overhaul their practical courses in physiology. No doubt the present experimental classes do teach useful enough principles, but as a rule the students fail to grasp the points, men become bored, and the results obtained in the majority of instances seem to them to be far removed from medical work. Certainly these admirable exercises devised or elaborated by Professor Bayliss give a lead in the right direction.

NOTES ON BOOKS.

A Manual on Unfit Houses and Unhealthy Areas[4] (printed, oddly in view of the title, on foolscap paper) has been issued by the Ministry of Health. The first part deals with the general policy to be adopted in regard to unfit houses and unhealthy areas, the second with unfit houses in particular, and the third with the methods of treating unhealthy areas. The first problem, it is stated, will, as a rule in existing circumstances, be that of rendering houses in a bad condition reasonably fit without displacing the tenants. It is added that until more houses are provided great caution should be shown in demolishing existing houses. There is a paragraph enjoining on local authorities the duty of giving special consideration to any building which for historical, aesthetic, or other reasons it may be in the national interest to preserve, and it is stated that the Society for the Protection of Ancient Buildings will be glad to give advice in such cases.

We have received from Dr. Samuel Crawshaw a copy of a small pocket-book, which has been drawn up this year by members of the honorary staff of the Ashton-under-Lyne District Infirmary, for the instruction of sisters and senior nurses. It is entitled *Guide to the Preparation and After-treatment of Operation Cases, with an Appendix on Medical and Surgical Diets, and Methods of Collecting Pathological Specimens.*[5] The first nine pages give an outline of surgical ward work. The directions are admirably clear, and the notes on dietetics should help nurses to understand the principles upon which a scientific diet is constructed for different classes of disease. Much care has evidently been taken with the choice of words, and the pamphlet is rounded off with a paragraph giving due acknowledgement to the authors whose works have been consulted during its compilation. A better little guide of its kind we have never seen.

A second edition has been published of Colonel R. J. BLACKHAM'S *Pocket Guide to First Aid in Cases of Poisoning.*[6] The notes are printed on three sides of a small folding card; they are not intended to replace the services of a medical man, but to be a guide to what should be done while the doctor is being fetched. The information is given in clear and concise form, and the directions generally are such as an intelligent lay person could properly carry out before the arrival of medical aid.

[4] Published by H.M. Stationery Office. To be obtained through any bookseller, price 1s. net.

[5] Printed for private circulation. A few copies can be obtained from the Secretary, Ashton-under-Lyne District Infirmary, price 2s. 6d. each.

[6] *Pocket Guide to the First Aid to be Rendered in Cases of Poisoning.* By Colonel R. J. Blackham, C.B., C.M.G., C.I.E., D.S.O., M.D. Pocket First Aid Series, No. 1. Colchester: Wiles and Son. (6d. net.)

APPLIANCES AND PREPARATIONS.

Motor Accessories.

THE Duco grease injector supplied by Messrs. Brown Brothers is a very simple and effective instrument, which may be used for grease, oil, or petrol. It consists of a solid wooden plunger, which nearly fits the brass cylinder. To the end of the plunger are attached two leather washers working in opposite directions, with the result that the plunger fits closely both when the injector is filled and when it is emptied. There are no caps to be unscrewed before filling. The injector is extremely useful for introducing grease into gear-boxes or into inaccessible parts of the car.

The Igna sparking plug is small and neat in appearance, and is simply constructed. It consists only of the central electrode, the insulation, and the body, and it can be quickly and effectively cleaned by means of the Igna cleaner. It is claimed to be gastight. We have found the plug work well, the engine running satisfactorily under varying conditions. The plug is supplied by Messrs. Brown Brothers of Great Eastern Street, E.C.2.

Stainless Steel.

In recent years a large amount of work has been carried out on the effects produced on the rate of corrosion of steel by alloying it with small proportions of other metals, and it has been discovered that several metals, when added to steel in suitable proportions, confer upon it to a marked degree the power of resisting corrosion by moist air and corrosive substances generally. So far as steel used for general purposes is concerned, the particular metal which has been found of most service for this purpose is chromium, and it is interesting to note that so long ago as 1892 Sir Robert Hadfield prepared chromium steel alloys containing about 11 per cent. of chromium, which resisted corrosion by the air so well that after twenty-three years' exposure under ordinary conditions bars of the alloy showed only very slight rusting. The first application of such an alloy commercially, however, consisted in the employment of the non-tarnishing alloy known as "stainless" steel for articles of cutlery, etc. This material is a chromium steel alloy, containing approximately 12½ per cent. of chromium, ½ per cent. of cobalt, traces of manganese and silica and a decidedly low proportion of carbon; it is much superior to ordinary steel in its resistance to corrosion, but its cost is relatively high, principally due to the fact that metallic chromium is still a comparatively expensive substance. In spite of the cost, however, the obvious advantages of a non-tarnishing steel are so great that "stainless" steel is now being used on a comparatively large scale by cutlery manufacturers, and it appears very probable that it and other alloys of a similar type will come into still more extended use for this and other similar purposes in the near future. We have recently received from Messrs. Maw, Son, and Sons a pair of dissecting forceps made of this steel; they are of good pattern and well finished, and will probably prove convenient.

MEDICAL PRACTITIONERS AND INCOME TAX.

THE following is a report of the evidence in chief given before the Royal Commission on the Income Tax by Dr. G. E. Haslip on behalf of the British Medical Association on October 9th, 1919.

(1) Innumerable accretions, legislative and administrative, have led to such complication in the return for assessment of income tax that it is almost impossible for the busy medical practitioner to make the return unaided. Form No. 11—itself a four-page document—is accompanied by four closely printed, small type, foolscap pages of explanation.

To fill in the usual claim for exemption, abatement, or reduction of tax: A doctor's professional income must be returned on the average of the three preceding years. His income from any public office must be returned on the actual income of the year. His income from property must be returned at the amount of the Schedule A assessment on the property concerned. His income from occupation of land must be returned at double the annual value of the land. His income from taxed dividends must be returned at the actual income of the year of assessment (an unknown quantity). His income from untaxed dividends and interest must be returned at the amount received in the year preceding the year of assessment. And the charges on his income must be returned at the actual charges for the year of assessment.

(2) Further complication arises from the number of forms which many taxpayers are asked to fill up. Thus many doctors are asked to fill up a Schedule D return, and a Schedule E return, and may be requested to make a

super-tax return; should the doctor be entitled to repayment for any cause, he may be required to fill in many other forms before repayment is obtained. Owing to want of acquaintance with the technicalities of Income Tax law and administration, the returns made by individuals may be erroneous in either direction, leading in the one case to loss of revenue to the Government, and in the other to excessive assessment of the individual.

(3) In practice the complicated procedure leads to inequality of assessment and injustice, and involves many taxpayers in the expense of employing an accountant. In the case of medical practitioners inequalities in assessment arise from:—

(*a*) The "three years' average" for professional incomes. The inequalities due to different modes of assessment have already been pointed out. The income of the previous year can easily be ascertained; further the year following a year when profits were high is more favourable for the payment of a large income tax, and vice versa.

(*b*) The "Depreciation" allowances. Schedule D is divided into six cases. Case I refers to profits derived from trade, manufacture, adventure, or concern. Case II relates to profits derived from any profession, employment, or vocation not contained in any other schedule. Thus professional men are assessed under Case II. Rule 6 of Schedule D, Cases I and II of the Income Tax Act, 1918, provides that "in charging the profits or gains of a trade under this schedule, such deduction may be allowed as the commissioners having jurisdiction in the matter may consider just and reasonable, as representing the diminished value by reason of wear and tear during the year of any machinery or plant used for the purpose of the trade, and belonging to the person by whom it is carried on." The Inland Revenue have always held that this rule only applies to Case I, and that it is not applicable to Case II. This is a distinct hardship as between one taxpayer and another, since many professional men now use a considerable amount of machinery, such as motor cars, and *x*-ray and other costly electrical apparatus. Allowances for renewals and replacements do not meet the case. A man setting up in practice spends a considerable sum on the purchase of a car, on apparatus, and on fittings for his surgery. No allowance can be claimed at a time when he is building up a practice, and requires all the relief and assistance he can obtain. And if for any reason he retires from practice before renewals are necessary—for example, in five years—he obtains no relief whatever for the diminished value of a car by reason of wear and tear over the period. It is submitted that Case II should be treated in the same way as Case I, in this matter of depreciation.

(*c*) The depreciation of wasting assets. At present there is no provision in income tax law for granting to any taxpayer an allowance in respect of depreciation of wasting assets. This hardship particularly affects doctors who have to pay a heavy premium for their leases, as is the case in certain areas.

(*d*) The joint assessment of partnerships. Partners are practically compelled to obtain full particulars of the assessment of the partnership from the surveyor, and to ask him to allocate between the partners the net duty charged, according to their individual liability. At the present time, when there are varying rates of tax according to the individual's total income, and various reliefs on each partner's taxed income allowed against the assessment on the firm, each partner is practically compelled to disclose to the other partners full details of his private income, thus doing away more or less with the confidential nature of the return. It would be greatly to the convenience of the taxpayer if each partner were assessed separately.

(*e*) The deduction of a proportion, not exceeding two-thirds, of the rent of a dwelling house for purposes of business. Inequality arises from the fact that the amount allowed in each area is determined by local commissioners, between whom no common standard exists.

(*f*) Relief in respect of children. In view of the heavy cost of professional education and training, considerable extension is needed both in the sum upon which relief is allowed and with regard to the income limit. A professional man who wishes to do justice to his children, and to bring them up in his own station in life is particularly hard hit. The trader has a business, with equipment and stock, etc., to leave for his children; the professional man must invest his savings in their education. A further but subsidiary point in this connexion is that the trader's own business capital yields a rate of interest which forms part of his business profits; the whole of these profits are treated as "earned" income, whereas the professional man's savings being invested *outside* his business are treated as unearned.

(4) The Council of the British Medical Association strongly supports the proposals of the Board of Education with regard to relief in respect of children.

(5) To sum up, the British Medical Association submits the following suggestions:

(i) That the filling up of return forms would be much simplified if the income were returned on the basis of the income received for the year preceding the year of assessment. The basis to be uniform, as far as possible, for all sources of income.

(ii) That one form only should serve for assessment under any schedule, for super-tax and also for repayment where the taxpayer is so entitled.

(iii) That depreciation of machinery—such as motor cars and electrical plant—should be allowed in Case II as in Case I.

(iv) That partners should have the right to be separately assessed.

(v) That there should be uniformity of treatment in the deduction of a proportion of the rent of a dwelling-house used for purposes of business.

(vi) That relief in respect of children should be allowed in the manner recommended by the Board of Education.

Dr. Haslip was examined by various members of the Commission. Asked whether the proposal (3) (*a*) applied to income or cash receipts, Dr. Haslip said that he preferred to apply it to receipts. Cash receipts were accepted by surveyors of taxes in some districts.

With regard to (3) (*b*) depreciation allowances, he said, in reply to questions, that allowances for renewals and replacements did not meet the case, taking into account all the elaborate apparatus and machinery now required in doctors' laboratories and surgeries. In the case of a motor car, he said that assuming the car to cost £600, and reckoning £100 a year for depreciation, the doctor received nothing annually for that depreciation, but at the end of six years, when he was taking another car, he was allowed so much for the renewal, less scrap value; the amount was distributed over three years, the average again coming in. One of the members of the Commission pointed out that if the doctor hired a car from someone else who had to stand loss by depreciation, hire would have been included in the professional expenses. The witness acquiesced.

Asked whether the doctor had an allowance for the running and the working of his car, Dr. Haslip said that the allowance was only for the petrol and the cost of working, not for the depreciation of the machine.

Asked whether his suggestion was that depreciation should be allowed on a car in exactly the same way as the machinery of an industry, Dr. Haslip replied in the affirmative.

It was pointed out that in Rule 6, dealing with the profits and gains of a trade, the Commissioners might make an allowance in respect of wear and tear, and the witness was asked if he intended to suggest that the rule, instead of saying "a trade," should say "a trade, profession, or business." The witness replied in the affirmative.

Asked as to the depreciation of wasting assets (3) (*c*), Dr. Haslip said he was aware that it raised a large economic question. He admitted that it was largely a question between the tenant buying the lease and the lessor. On the other hand, it might be impossible for a doctor to practise in certain neighbourhoods without being over-housed. In comparison with other professional men the doctor's expenses were very heavy.

The Commissioners devoted a considerable amount of time to the question of joint assessment of partnerships (3) (*d*). Asked whether what was wanted was, that each partner should return separately, but that in respect of

that part of the return which affected the partnership profits the present practice should continue, Dr. Haslip replied in the affirmative. In reply to a further question, he said that partners could make separate returns before 1907; the change then made, one of the Commissioners stated, was due to the introduction of graduation. It was pointed out that the partnership paid, being the payer of the tax on the partnership profit. The difficulty was at what rate should the partnership pay? Apart from super-tax it could not pay more than 6s. Mr. Prettyman said that that point was important, but he did not see why a separate return should not be sent in, even with graduation; he illustrated the point as follows:

> Take the case of two partners. Let us say one has an outside income and the other has not. The one who has no outside income is entitled to rebate, and the other is not, because his total income is above the rebate limit. They return separately. They have an equal share in the partnership, and they each return £300 as their equal share of a total partnership profit of £600. I do not see why those two returns should not be sent in separately. A. sends his return in £300 from the partnership. B. sends in his return of £1,000, £300 from the partnership and £700 from other sources; and they are assessed accordingly. If the Revenue Department wishes to test the accuracy of that return, all they have to do is to call for the books in respect of the two amounts of £300. When they have called for the books in respect of the two amounts of £300, and have verified that, it seems to me that that is all that is necessary. I do not see why the partner who has only £300 should necessarily have any knowledge of the remaining £700 which belongs to the other partner.

Dr. Haslip said that was his point.

In subsequent discussion it was pointed out that the Rule provided that where a trade or profession was carried on by two or more persons jointly, the tax *in respect thereof* should be computed jointly and in one sum—that was to say, that tax due from the partnership profit was to be paid. It might be that if the partnership desired to pay a smaller rate than 6s. on its profits, then the question would have to be gone into of what each partner was individually to be rated at in respect of his share. A partner individually entitled to a rebate got it, but it was necessary to ascertain the figure at which the partnership was liable to pay tax upon the partnership income. One partner would have to be responsible for the partnership returns of the total partnership profits, and Dr. Haslip said that there would be no objection to accepting this responsibility.

With regard to (3) (*e*) the witness was asked whether he thought the reduction of a proportion of the rent of a dwelling house used for purposes of business should be a fixed proportion. He said that what was desired was uniformity. The decision should not necessarily be left to the local surveyor. He thought it would be satisfactory if the exact allowance was left to be determined by the Inland Revenue within a prescribed limit.

With regard to (3) (*f*) the witness said that if a doctor saved, say, £500 and invested it, he was taxed on the yield as unearned income, whereas a business man who put the amount into his business, where it probably earned a larger percentage, would only be taxed at the earned income rate. He did not see how that could be prevented, but the doctor might be helped. To enable a doctor to give his sons the same education as he himself had had, he required some help such as the Board of Education had proposed. The suggestion did not apply to professional men only.

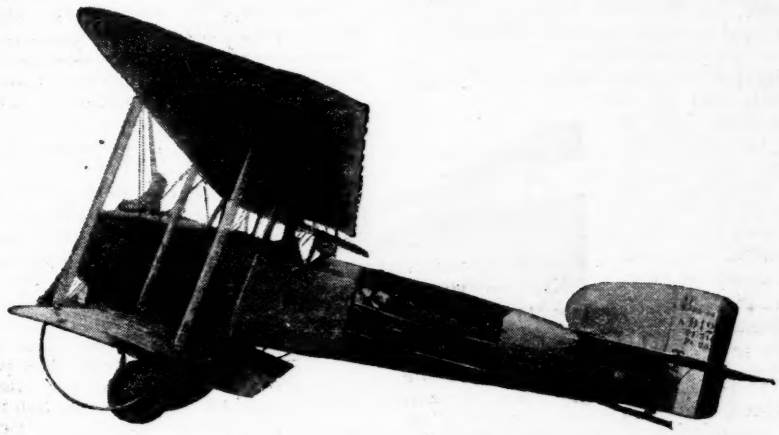
THE proceedings at the National Conference on Infant Welfare, held in London in July last, have been published in a volume by the National League for Health, Maternity, and Child Welfare (4, Tavistock Square, London, W.C.1), price 1s. 6d

MILITARY MEDICAL AEROPLANES.

FRENCH AEROCHIRS.

M. TUFFIER, whose advice on all surgical subjects has been so highly appreciated by the French War Office throughout the war, related to the Académie de Médecine a short time ago his experiences of a professional visit to see a wounded French general in southern Morocco. He took the occasion to discuss the value of aeroplanes in military surgery, and has been good enough to furnish us with photographs showing the way in which the arrangements for the transport of wounded have been improvised.

The patient M. Tuffier went to see had been brought by aeroplane to Bu-Denib, a point to the south of the Atlas Range in Morocco, where the French have a large military station, with hospitals and an aviation camp. He was a general officer who, on January 15th, received a shell wound in the chest, in the fourth costal space, three centimetres from the left edge of the sternum. He was carried on a stretcher twenty-five kilometres to Kasr-es-Souk, where there was a post. Next day he had fever, difficulty of respiration, and was cyanosed. The regimental surgeon, who had returned so far with him, diagnosed pleural effusion, and telephoned for surgical assistance; a French army surgeon flew, with one stop, 310 kilometres to Kasr-es-Souk in two hours thirty-five minutes. The aeroplane had to pass over the middle Atlas at an elevation of 4,000 metres, and also over regions occupied by dissidents. On his arrival he met another army surgeon who had flown from Bu-Denib (85 kilometres) in an hour. Next day the patient was worse. As there were no facilities at Kasr-es-Souk for surgical treatment it was decided to take him to Bu-Denib by aeroplane. A Farman was sent for. The great difficulty was to get the stretcher into the aeroplane. An inclined plane was made with sacks of barley, and the patient was lifted on to a mattress in the observer's seat. As he had to travel half sitting he suffered from cold on the way, but his condition next morning was no worse. Radiography showed that the projectile, about the size of a kidney bean, lay some distance behind the heart but moved with it. M. Tuffier, who had been sent for on January 21st, arrived at Bu-Denib on January 25th, travelling by land; he found the patient in a very serious condition, with marked cyanosis, high temperature, congestion of both lungs, and a pleural effusion which had been ascertained to be sero-sanguineous. A second puncture of the chest withdrew 750 grams of pure blood. The patient immediately began to improve and was soon out of danger, but it was not considered advisable to attempt to extract the foreign body.



Bréguet aeroplane for transport of wounded. 1919 Type. The side panel is open, showing two wounded on stretchers, one above the other.

The French army in its operations in the south of Algeria and Morocco, and in the Sahara Desert, has, owing to the conditions of the country and the nature of the military operations, been led to make considerable use of aeroplanes for the transport of wounded. They have served well, not only by greatly shortening the time taken in transport from the front to a hospital, but have also made it possible to transport the wounded from outposts over intermediate tracts of country occupied by dissident tribes. Altogether a large number of soldiers wounded in these remote regions have been transported by aeroplane from advanced posts to hospital. In September, 1918, during early operations in the region, fifteen out of sixty wounded were carried by ordinary aeroplanes 110 kilometres in seventy minutes. Early this year a special type of aeroplane, designed by Dr. Chassaing, a member of the

French Parliament, who has taken a great interest in the subject, was stationed at Bu-Denib. M. Tuffier watched one journey it made while he was there. The aeroplane started at 7 a.m., flew sixty-five kilometres, over country occupied by dissidents, to an advanced post, shipped two wounded men (one with a fracture of the femur, and the other with a serious fracture of the arm), and was back again at Bu-Denib at 11 a.m. The aeroplane was of special construction, but was not found very satisfactory, owing chiefly to the difficulty of lifting the wounded men into and out of the fuselage.

At Wargla, in the wild country to the south of Algiers, aeroplanes belonging to a bombing squadron have been used, sometimes to carry surgeons to the place where the wounded man lay, sometimes to transport the man to hospital. A regular route, with five landing places, has been mapped out further into the desert for 597 kilometres. Pilots carrying wounded have covered as much as 800 kilometres in seven hours, making two halts. Communications by land are often cut, but when the road, which is very rough, is open, a motor-car takes seven days, camels or mules twenty-six days. Wounded have also been brought from posts in the Sahara south of Tunis to a hospital 90 kilometres away by ordinary aeroplanes of the Farman type. The various scattered posts, often surrounded by dissident tribes, are kept in communication with head quarters by wireless telegraphy. M. Tuffier heard of no mischance in any case, but owing to the conditions of temperature near the ground flying by day is very difficult, and it is usually necessary to climb 1,500 to 2,000 metres. But this difficulty, it is said, may be avoided by flying in the early morning. The great enemy of the flying man is the sirocco, which may blow with great violence for three, four, and even six days. The clouds of sand it raises not only penetrate to every part of the machinery, but are so dense, so high, and so widespread that the pilots would not be able to find their landing places. During a sirocco, therefore, aerochirs are out of commission.

Bréguet aeroplane for transport of wounded, 1919 type. Panel closed. The patient in the upper berth has raised his head but the capot will be closed before the aeroplane starts.

The French are giving careful study to the designing of aerochirs to afford a convenient method of transporting the wounded, but whatever success is attained, it must often happen in frontier operations such as those in Africa that an aeroplane of the special type will not be available, and improvization will become necessary. MM. Nemirodsky and Tilmant have devised a flying ambulance to carry, in addition to the pilot, a surgeon and an *x* ray operator, together with surgical instruments, sterilizing apparatus, dressings, and *x*-ray equipment. The total weight carried is, it is stated, about 700 kilos (about 1,500 lb.). The Canadian Army Medical Corps made some experiments in designing an aeroplane for transport of wounded, but a description is not available. A great deal of progress has been made in increasing the carrying power of aeroplanes. The new Handley Page commercial aeroplane, it is said, can carry fifteen to twenty passengers in a saloon 22 ft. long, 4 ft. 6 in. wide, and 6 ft. high.

MOTOR NOTES FOR MEDICAL MEN.

By H. MASSAC BUIST.

THE FUEL PROBLEM.

WHILE the Government inquiry into the alleged profiteering in motor fuel is welcome, the medical man, who stands in sore need of reducing his fuel bill, will be well advised not to take too optimistic a view concerning the practical outcome of the investigation. Undoubtedly there is profiteering afoot; but it is so favoured by a combination of circumstances that it is almost a case of choosing to put up with it or go without the fuel. In the first place, we are at present largely dependent for supplies on the New World, where there is a demand, under equally gainful conditions, for every gallon of fuel shipped to this country. Consequently, if we will not pay the price asked, there is a great likelihood of our being left without it. The Exchange is strongly against us, and shipping rates are abnormally high, and these two conditions combine to aggravate the situation; while the cost of producing benzol at home under present and immediately prospective conditions will, in any case, prevent the price of the old-established rival form of fuel falling as low as it might, probably for several years. In brief, petrol has not a very close competitor in benzol, though the motoring public is quite satisfied as to the practicability of benzol, a point that has been further demonstrated by the 10,000 miles test undertaken by the standard four cylinder 80 by 150 mm. bore and stroke Sunbeam car.

The bright spot on the horizon is provided by the very rapid rate at which oil working is being developed in British possessions and spheres of influence; but here, too, we have to remember that all new machinery and tankers and transport costs are on a post-war basis. Nevertheless, this is the direction from which relief will come presently. As to supplies from the New World, the only unknown quantity is whether the Americans care to make some concessions in the present to preserve the very valuable goodwill they have established in this country.

THE AUTOMOBILE ASSOCIATION'S BENZOL TEST.

The Automobile Association's test of benzol was over a distance of 10,000 miles with spirit supplied to the National Benzol Association's standard specification by the Gas Light and Coke Company, the Staveley Coal and Iron Company, Messrs. William Butler and Company, the Staffordshire Chemical Company, and Messrs. Bolckow, Vaughan, and Company. In other words, it is presumably of the quality supplied to any motorist who purchases the spirit manufactured by members of the National Benzol Association. The usual systems of observation, including sealed connexions and so forth, were employed. Lodge sparking plugs were used, No. 1 becoming sooted up at 4,152 miles, when it was cleaned and replaced. Otherwise none of the other plugs were cleaned in the course of 10,000 miles, so that this showing is very satisfactory for this class of engine. Vacuum A lubricating oil was used with complete satisfaction, the consumption of it working out at 1739.13 miles per gallon, which is very economical. From 20 to 25 per cent. of the roads traversed were either in good or fair condition, the rest being either in poor or bad condition. The average mean weight of the car was 1.8 tons, and the average benzol consumption 24.57 miles per gallon, which is an average of 44.22 ton-miles a gallon. Over one stage of 129.98 miles the consumption worked out as high as 18.56 miles per gallon of benzol, or 33.6 ton-miles to the gallon; while the most economical fuel consumption was obtained over a 145½ mile stage at 27.71 miles per gallon, otherwise 50.80 ton-miles a gallon. The average estimated speed of the car was 23.46 miles an hour, so that it was running somewhere near its lowest economical speed. Samples of the fuel used were taken and analysed during the test. At approximately the half stage, when the car had run 5,169 miles on benzol, the inlet and exhaust valves and their stems, as well as the valve caps and sparking plugs, were examined; and this was done again at the end of the test, which is the first official one by a recognized motoring organization of commercial benzol. Hence the Automobile Association has published a very lengthy and detailed report, which can be had on application to its Fuel Department at the head quarters, Fanum House, Whitcomb Street, London, post free for 3s. 6d. As a result of this test the public need no longer hesitate to buy benzol according to the National Benzol Association's specification.

RECIPROCITY in medical practice has been established between Japan and Mexico.

THE University of Cincinnati has established a department of industrial medicine and public health.

British Medical Journal.

SATURDAY, DECEMBER 13TH, 1919.

THE LONDON MEDICAL STUDENT.

MEDICAL education in London has entered on a new phase, and since London is still the principal medical school in England what happens there affects a large section of the profession. It there ore seems worth while to review the present situation, without, however, entering into many details, for we will not pretend even briefly to record the history of the agitation for the reform of the University of London which has been on foot for a full half-century.

The present situation is the direct outcome of the recommendations of the Royal Commission on University Education in London, which reported in April, 1913, after sitting for over three years. It was appointed to inquire into the present working and organization of the University of London, and into other facilities for advanced education—general, professional, and technical—which existed in London. Its recommendations throughout presupposed the reorganization of the University of London and were not concerned with proposals for the establishment of another university. More than twenty years earlier another Royal Commission had been appointed, under the chairmanship of the first Lord Selborne, to inquire whether any and what kind of new university or powers should be provided for the advancement of higher education in London. Its appointment was, to quote the words of its successor, "the culmination of a long agitation which arose from several different motives and was supported by different bodies and persons." There was, in the first place, the dissatisfaction felt by the medical teachers in London at the very small number of university degrees obtained by their pupils in proportion to the large number of students and the opportunites for clinical teaching. This dissatisfaction was the reflex of the discontent of the diplomates of the London Colleges, whose grievances were set out in a cogent report drawn up by the Metropolitan Counties Branch and endorsed by the British Medical Association. One outcome of the action then taken by the London medical teachers was the presentation by the Royal Colleges of Physicians and Surgeons of a petition for a charter empowering them to confer degrees.

On the other hand, the representations of an association for promoting a teaching university in London had led to the presentation by University and King's Colleges of a petition for the grant of a charter for the establishment of a university, with faculties of arts, science, medicine, and laws, in which examination should be associated with teaching, under the direction of the same authority, and the teachers should have a substantive voice in the government. The Selborne Commission rejected both schemes, but reported that the case for a teaching university was made out, and that there should be one university for London, and not two. Three members of the Commission, and not the least influential—Sir William Thomson (afterwards Lord Kelvin), Professor (afterwards Sir) Gabriel Stokes, and Dr. Welldon—set out in a minority note their preference for the establishment of a new teaching university for London, leaving the University of London untouched. The next chapter in the story was the adoption by the Senate of the university of a scheme of reform which was rejected by Convocation. The proposal of the colleges for what had come to be called "the Gresham Charter" was then revived, and referred in 1891 to what was commonly known as the "Gresham Commission." This Commission found once more in favour of one university in and for London; it advised that a more distinct and important position should be given to teachers in the university organization, and attempted to conciliate the non-collegiate or "external" graduates by recommending that a special board for external students should be appointed by the Senate, with the general instruction to maintain a uniform standard of examination for internal and external students. An Act was passed in 1898 to give effect to the recommendation of the Gresham Commission. The scheme was tried, and failed, as everyone admitted. Thereupon the new Royal Commission, which reported in 1913, was appointed, and made recommendations which, in principle, have been the foundation of recent action by the Board of Education and the medical schools.

The general conclusion of this last Royal Commission with reference to medicine was that the university ought to provide teaching in clinical subjects of university standard. To this end it recommended the organization of several university hospital units, each consisting of "a professor with the control of wards; an out-patient department; assistants nominated by the professor with a view to complementing his own knowledge and affording him the special assistance he requires to carry on research in the direction in which he is interested; and, finally, laboratory accommodation in close proximity to the wards, not only for the service of the wards and the examinations and procedures connected with the diagnosis and treatment of the cases, but also for the purposes of research." This principle has now been accepted, with certain modifications of detail. Thus a hospital teaching unit is now defined as consisting of three "elements"—medicine, surgery, and diseases of women and children—each element possessing a staff and equipment on the scale recommended for a university hospital unit by the Commission. With the assistance of the Board of Education hospital clinical units of the new type are being established in London; no doubt many of the provincial universities will do the same, but we are not now concerned with these. In London, at St. Bartholomew's, the elements in medicine and surgery are established, and steps, we understand, are being taken to organize the third element. A move in the same direction has been made at St. Thomas's, and we believe an announcement may shortly be expected showing that a complete unit has been established at University College Hospital. The London Hospital is understood to be moving in the same direction.

Two things of first-rate importance to medical education in London arise out of the recommendations of the Royal Commission and the action taken thereon. The first is that for the medical student in London there will be provided educational opportunities up to university standard, to be obtained through the organization, probably eventually of not less than four, possibly five, university units, which will set the pace for all the teaching in the schools of which they will form the central nucleus. London therefore seems to be following more or less closely the model of Paris, where the Faculty of Medicine has more than twenty professors, each in charge of a hospital element, which is equipped as it is intended the element of a hospital unit should be equipped in

London and other teaching centres in this country. All the physicians, surgeons, and specialists at the hospitals in Paris are roped in to help in giving practical instruction to students, and the same plan will doubtless be followed here. The second thing that emerges is that the student, having received instruction and training up to university standard, becomes entitled to a university degree.

The two things hang together. Given the condition precedent, the condition subsequent follows as a common right. It has been argued that it is the establishment of a university standard of education that matters, and that a degree is only a hall-mark which does not alter the fineness of the metal. This argument would have been good in Bologna in the eleventh century, where teaching preceded organization of a university, as we understand it to-day, and where in fact the students combined in a "universitas" —what we would now call an "association"—to obtain teaching and to remunerate their teachers. But it will not do to-day when the whole civilized world is covered by universities, and when the evidence of having passed through a university training is known to all men in the degree. It is true that the public indifferently call all practitioners of medicine "doctor," but there are those who, as has been well said, dislike to assume a courtesy title which discourtesy may refuse. The Royal Commissioners of 1913 admitted the grievance of London medical students, but rather shirked an attempt to remedy it. They considered that the proper course for them was to consider what in the medical faculty, as in others, was essential to a real university education and to draft recommendations which would result in adequate provision being made in London to make this education open to all able to profit by it. "The degree," they said, "will follow in the ordinary course and the grievance should naturally disappear." With the institution of hospital clinical units on a university model and giving instruction of university standard, which we may hope to see achieved in London within the next few months, the first condition is fulfilled. But the second must be fulfilled also; the demand will be so well grounded that it cannot in justice be refused.

The hope has long been cherished that the University of London might be so reformed that it would be to London medical students an Alma Mater, and not a stepmother. The failure of half a century of agitation and Royal Commissions and an Act of Parliament to reconcile the needs of higher education in London with the demands of external graduates—and we gather from a recent statement put out by the University of London Graduates' Association that the external graduates are as obdurate as ever—may be taken to have proved that this hope must be abandoned. If now we turn to the other alternative it will be seen that, with four or five hospital units, each having its professors — for they would in fact be professors, though without a university—and their assistant professors, there would be the material for a faculty of medicine in a teaching university. There is substance in the objection to a one-faculty university. Though it is true that in a university of many faculties one faculty often finds the others very tiresome, yet the necessity to convince them tends to encourage a broader outlook. All through the long controversy about the University of London the one clear principle has been that in it teachers should have a predominant influence, and we may ask whether there are not in London ample materials for the constitution of other faculties? As Sir Alfred Keogh pointed out in the address he wrote for the Special Clinical and Scientific Meeting of the British Medical Association in London last April, there has been produced at the Imperial College of Science and Technology, South Kensington, what is virtually a science and technical university. He claimed that it was in fact a three-faculty university, and he asked whether there was not in the history of the Kensington movement an example which might well be followed by the London medical schools. It may, we think, now be said that the medical schools are moving in the direction indicated. Already there has been concentration—if a word which has aroused so much heated controversy may be used—in preliminary subjects. When the hospital clinical units are in working order there will be in fact if not in name a medical faculty; and that faculty can hardly long rest satisfied with a condition of things under which its pupils, who will have received education of university standard, shall in the majority be denied a university degree. The relation between the University of London and the medical schools is a sham, and the Imperial College has refused to participate in the sham, but it might be induced to look favourably on the proposal to join with the reformed medical schools and (it might be hoped) with some existing faculties of arts, in a teaching university for London.

EARLY MEDICAL MANUSCRIPTS.

THE study of the history of medicine is not only of archaeological interest, but provides some lessons for to-day. It has been much neglected in this country, but there are now evidences of awakening interest. The Section of Medical History of the Royal Society of Medicine, recently founded, does much excellent work, which is published in the *Proceedings* of the society; and the FitzPatrick lectures of the Royal College of Physicians have, during the last sixteen years, led to the presentation every year of a study of some particular period. The Alembic Club Reprints (Edinburgh), of which seventeen numbers have now appeared, contain much medical matter. From the United States we have the *Annals of Medical History*, which is published regularly, and the proceedings of the Charaka Club, which appear occasionally. In France the medical history society has resumed its meetings and will begin to issue its *Bulletin*. From Holland we have *Janus*, a very well edited periodical, but somewhat limited in size. Germany has, or had, one regular publication limited to the history of medicine (*Archiv für Geschichte der Medizin*), various occasional publications, and several periodicals dealing with the history of science. Denmark has one periodical devoted to medical history; Portugal also has one concerned with the history of medicine in that country. In Great Britain there is, so far as we are aware, no professorial chair of the history of medicine, although there is a lectureship in the subject at Edinburgh. In Paris M. Letulle is professor of the subject, and there is also a chair of the history of science. In Germany there are four professorships—Leipzig, Halle, Freiburg, and Berlin. In Italy there are six or seven; in Austria one (Vienna). There are professorships in Denmark, Norway, Switzerland, Portugal, and Canada. In the United States many universities have a lectureship or professorship, and there are three professorships of the first rank—Washington, New York, and Boston. But though this country makes rather a poor show, there is growing up, most appropriately at Oxford, a school of medical history under the inspiration of Sir William Osler and through the

encyclopaedic researches of Dr. Singer, who has entered upon a study of the subject in the true scientific spirit; in addition to his original researches, he has undertaken to edit a series of classics of medicine in English, and has, moreover, actually in preparation a series of classics of science. That he should be engaged in both tasks illustrates the fact that the early history of medicine is so intermingled with the history of science in general that the investigator necessarily finds himself involved in both.

An illustration of the serious manner in which the researches are being prosecuted is afforded by the Catalogue of Early Scientific Manuscripts in the British Isles on which Dr. and Mrs. Charles Singer have been engaged for some years. It is designed to furnish material for the study of the retrogression and resurrection of science during the thousand years that elapsed between the Greeks and the Renaissance. It was indeed an inglorious period for science, but, as Mrs. Singer suggests, we may learn from evil as from good. The spectacle of the gradual crumbling of the fine structure of Greek science should cause the student of to-day to reflect on the risks the future may have in store, and stimulate us to ask whether our own science is absolutely safe and how we may most surely avoid the pitfalls of our predecessors.

But another aspect of the study of mediaeval writings on science is that they contain the germs of the great developments which have taken place during later centuries. The vast majority of the mediaeval science manuscripts scattered in libraries, large and small, have never been examined, much less printed. Dr. Singer has taken in hand those concerned with anatomy, and is so far advanced in the work that he finds something like a continuous story emerging. Mrs. Singer is engaged in a similar examination of the plague tractates, and Miss Joan Evans is at work on the lapidaries. The various headings of the catalogue make a long list. They have been chosen after experience as best facilitating the classification of the 40,000 entries that have to be handled. It is hoped that ultimately all the important manuscripts in the catalogue will be examined, either directly or by means of the rotograph, which provides fixed negative photographs, facsimile in all but colour, of the original manuscript. They can be examined at leisure, and similar work laid side by side for comparison, a method indispensable to sound scientific inquiry. Mrs. Singer asks for volunteers in the task of reading the manuscripts, either a whole section or a small group, or a single document. She makes the statement, which will be encouraging to such volunteers, that works written before the fifteenth century are usually remarkably clear and legible. Expert palaeographers, she says, support her in assuring the student that a month's work will probably give the mastery of any single style of handwriting (except the worst), while a week's work will seldom fail to put the reader at ease with the work of any one scribe. Excellent dictionaries are published of the abbreviations in common use in mediaeval writings, and Mrs. Singer has herself prepared a small handbook of the most usual abbreviations in medical manuscripts, which she is ready to lend to serious volunteers.

THE PROCEEDINGS OF THE ASSOCIATION'S APRIL MEETING.

THE volume containing the *Proceedings* of the Special Clinical and Scientific Meeting of the British Medical Association in London last April was published a short time ago, and copies will be supplied to all members of the Association free on application to the Financial Secretary of the Association, 429, Strand, London, W.C.2. The volume contains the address, entitled "The New Birth of Medicine," which the President of the Association, Sir Clifford Allbutt, wrote, and also the text of Sir Cuthbert Wallace's lecture on the rise of the casualty clearing station, in which he gave an account of the way in which this medical military unit developed from relatively small beginnings in August, 1914, to the very complete organization which was in existence in 1918, and made some suggestions for the future. The discussions in the three Sections—Medicine, Surgery, and Preventive Medicine and Pathology—are fully reported in the volume, and it contains also accounts of the numerous demonstrations. In an appendix Colonel Crawford, I.M.S. (ret.), has related the growth of the personnel of the naval and army medical services during the war. This is followed by a list of those who gave their lives. Finally, through the help of Sir Anthony Bowlby, lists are given of medical staffs at head quarters in France, Italy, Salonica, Malta, Mesopotamia, and East Africa, and of the head quarter staffs of the Canadian, the Australian, the New Zealand, and the South African Army Medical Corps. The price of the volume to non-members is 3s.

MEDICAL INSURANCE AGENCY.

AT a meeting of the Committee of Management of the Medical Insurance Agency, held on November 26th, the chairman, Dr. G. E. Haslip, presented a report for the nine months ending September 30th, 1919. He recalled how, owing to various circumstances, the earnings of the Agency in 1918 had decreased by some £135, and said that the leeway had been more than made up this year, for in the nine months with which he was dealing some £600 more had been earned than in the corresponding period of 1918. There was evidence that the efforts of the Agency to give unbiassed advice in the matter of life assurance and the selection of an office suitable to the particular needs of the assured were appreciated; during the nine months 44 life policies were completed, as compared with 15 in 1918 and and 20 in 1917. Motor car business showed good progress; the policies recommended by the Agency had been found satisfactory, and the Agency was now in a position to state that all claims had been paid not only promptly but on a generous basis. Medical men did not escape when the thefts of motor cars were common some months ago, and several cases of total loss were made good through the Agency. Establishment charges had increased, for the Agency now engaged its own staff; but the total income showed a very considerable increase, as did the net surplus. After referring to rebates made to persons insured through the Agency, the chairman concluded by saying that it would be possible at once to distribute a further sum of £660 out of the surplus funds to medical charities. The committee accepted this recommendation, and allotted the amounts as follows: Royal Medical Benevolent Fund, £200; Royal Medical Benevolent Fund Guild, £200; Epsom College Benevolent Fund, £210; Royal Medical Benevolent Society of Ireland, £25; Birmingham Medical Benevolent Society, £25. This allotment raises the amount distributed to medical charities during the year to £1,015. The total amount allocated to medical charities by the Agency since its establishment has now reached £5,420. This striking fact is worth bearing in mind, for we understand that at present the Agency has on its books less than 3,000 names; if a larger number of members of the profession resorted to the Agency—which offers not only good terms but good advice in the selection of an insurance office and the adjustment of the terms of a policy—the sums available for medical charities would be correspondingly increased. Anyone who reads the reports we publish from time to time of the cases assisted by the Royal Medical Benevolent Fund, and its auxiliary, the Guild, will know how dire the necessity is. The full details which come before the Distribution Committee of

the Fund are, we are told and can well believe, of the most harrowing kind. Full particulars can be obtained on application to the Medical Insurance Agency, 429, Strand, London, W.C.2.

RENAL DISEASE AND HIGH PROTEIN DIETS.

As the cause of chronic nephritis is so often doubtful, Newburgh[1] carried out several series of experiments on rabbits to determine if the elimination of abnormally large quantities of nitrogenous material by the kidney will cause nephritis. As the results were positive they are of considerable interest and open the way to further investigation. The degree of injury produced by nephrotoxic substances largely depends on their degree of concentration in the blood; thus medicinal doses of mercury are usually harmless, though poisoning by the ingestion of the perchloride in large amounts may produce fatal acute nephritis. Logically the same principle might be applied to nitrogenous substances, the kidneys being able to secrete a certain amount for an indefinite period without injury, but becoming damaged if the quantity of some or of all the nitrogenous bodies secreted be increased and kept at this higher level for some time. In the first instance, rabbits were fed on nothing but the whites of two hard-boiled eggs daily for a week; albuminuria with casts rapidly followed and microscopically the kidneys showed cloudy swelling, casts, and engorgement. By an ingenious method it was proved that the albumin was not directly derived from the diet; intraperitoneal injection of the albuminous urine rendered guinea-pigs hypersensitive to intraperitoneal injection of rabbit's blood serum, but not to that of 2 c.cm. of a 1 in 100 solution of Kaulbaum's white of egg. A further series of experiments showed that when rabbits absorb the digestion products of white of egg in sufficient quantity for a considerable time well marked acute or subacute nephritis may result. In order to decide whether these changes were due to an excessive amount of nitrogenous bodies normally present in the blood in small amounts or whether they were caused by some nephrotoxin peculiar to eggs, rabbits were fed on casein. No renal lesion resulted from the ingestion of 15 grams of ca ein daily, the nitrogen metabolism being about double the normal; but when 30 grams were taken daily and the nitrogen metabolism was trebled, well marked parenchymatous and other changes were seen in the kidneys of three out of four rabbits, and the thoracic aorta showed endarteritis with fatty degeneration, liquefactive necrosis and cholesterin. Fifteen rabbits fed on an exclusive diet of soy bean, containing 37.8 per cent. of protein, for four and a half to twelve months regularly showed, and often died from, subacute or chronic nephritis due to changes in the convoluted tubes and overgrowth of connective tissue; the lesion was not a primary glomerulo-nephritis or the result of arterio-sclerosis. The protein metabolism was double the normal, whereas with casein and white of egg the protein metabolism must be trebled to produce nephritis. Soy bean nephritis interferes greatly with renal function, and causes an early and persistent retention of urea in the blood. The renal changes produced by high protein feeding are not due to the passage of an excess of urea through the kidneys, and at present there are not any data to decide whether or not the amino-acids are the responsible factor.

DR. LYMAN SPALDING.

OUR issue of July 26th, 1919 (p. 113) contained a short annotation inspired by Dr. H. M. Hurd's historical article on Dr. Lyman Spalding (1775–1821), who originated the first national pharmacopoeia of the United States, and had much to do with the introduction of Jennerian vaccination into that continent. Since then Dr. J. A. Spalding of Portland, Maine, has sent us his life of Dr. Lyman Spalding,[2] his grandfather, published in 1916; this is based on a large number of letters from contemporary leaders of medicine in America, and thus gives a graphic description of the conditions of medical practice and thought more than a hundred years ago. The narrative is made specially valuable by numerous biographies of the medical men mentioned; they are for the most part in the form of footnotes, and are laconic—a character apparently inherited—always interesting, and not infrequently with a humorous touch. This pious work is dedicated to the writer's father, "who would have been pleased to know as much about his illustrious Father as Time has at last enabled me to discover." The amount of labour thus involved must have been enormous, but the book does not smell of the lamp, probably because it has been a labour of love, spread over ten years of active practice with its inevitable distractions. Learning also appears to have been inherited, as the grandfather was on this account nicknamed Sangrado. Into his comparatively short life of 46 years the subject of this biography crowded work of the most varied kinds: he played an important part in founding the Dartmouth Medical School, where he lectured on chemistry; he was president and professor of anatomy and surgery in the College of Physicians and Surgeons of the Western District, at Fairfield, New York; he was the first to publish Bills of Mortality (1800–1813) in Portsmouth, New Hampshire, and thus became well known in America; in the last four years of his life he brought out successfully the first national pharmacopoeia of the United States. This he started by reading a paper giving a practical basis for its foundation, and, although a committee was appointed to carry out his ideas, he eventually did nearly all the work. The publication in 1820 of the Pharmacopoeia, which was a book of 274 pages neatly printed on rather porous paper, about 10 by 6 inches in size, with a brief historical introduction, was the culminating point in Dr. Spalding's career, for about this time, while walking in the streets of New York, he was hit on the head by a box of rubbish falling from a second floor window. From this accident he never really recovered, and he died on October 21st, 1821. This biography is in some respects unusual, but it is perhaps on this account the more interesting.

NEUROLOGY IN THE WAR.

PROFESSOR HARVEY CUSHING was recently invited to give an address to the Massachusetts Medical Society on "what neurological surgery has gained from the war." He gave the address, which has now been published,[3] but expressed the opinion that we are still too near to the time of fighting to be able to answer the question satisfactorily. Cushing believes that the lay idea that the war has been a harvest of experience for the young surgeon is more false than true. Apart from an extensive experience of sepsis and fractures and a gain in personal confidence he has profited not much. The war-time hospital has not been an ideal training ground; pressure of work has excused much faulty and slapdash technique, the cases have only too often been operated upon and never seen again, and the diseased and infirm call for far more judgement in treatment and more delicate handling than did the soldier who was strong and healthy when "bowled over." Cushing remarks that whilst many, both surgeons and physicians, are capable of gaining experience in a given subject, few are capable of contributing to it. The conjugation of ability and opportunity, rare enough in ordinary times, is still rarer in war. He makes some graceful references to the work carried out in the British army and the efforts at specialization which were made. He expressed regret that the British, in view of their unquestioned leadership in neurology, did not set aside early in the war some special hospital or hospitals where the bulk of the organic neurological cases

[1] L. H. Newburgh, *Arch. Intern. Med.*, Chicago, 1919, xxiv, 359-377.

[2] *Dr. Lyman Spalding.* By his Grandson, Dr. James Alfred Spalding. Boston: W. M. Leonard, 1916, pp. 380.

[3] *Boston Medical and Surgical Journal*, November 6th, 1919.

could be congregated and worked over on a large scale by the concentrated efforts of their abler men. As a matter of fact, some such efforts in concentration and specialization were made, amongst others, at No. 21 Casualty Clearing Station and at the 7th and 14th General Hospitals in France, but the efforts at segregation in England were inadequate. Nevertheless, some very valuable contributions to neurology by Englishmen have already come out of the war, and there is plenty of evidence that more are to follow.

THE ANAL PECTEN BAND.

In whatever situation they are found, varicose veins lead to congestion of the surrounding tissues, and as a consequence of this congestion fibrous induration ultimately develops. Such induration following passive congestion is well exemplified in the neighbourhood of a varicose ulcer of the leg. Much the same thing occurs as a result of internal piles. A condition of mild chronic inflammation contributes to the production of the fibrosis in both cases. The branches of the superior haemorrhoidal veins arise in a minute capillary plexus situated in the submucous tissue of the pecten, and when these vessels are varicose this plexus becomes the seat of passive congestion, with the result that a deposit of fibrous tissue occurs in the surrounding tissue. This deposit takes the form of a circular band, varying in thickness and density, completely surrounding the lower part of the anal canal, and situated between the mucous membrane of the pecten and the external sphincter muscle. In well-marked instances the band of fibrous tissue can be distinctly felt, and gives an impression to the examining finger such as would be obtained if a rubber ring had been inserted beneath the skin at the anal margin. This deposit of fibrous tissue has been called "the pecten band" by W. Ernest Miles (*Surg., Gyn., and Obstet.*, November, 1919). It does not exist in the healthy anal canal. It is due to passive congestion brought about either by the varicosity of the superior haemorrhoidal veins, or by an impediment to the venous return resulting from habitual pressure in the chronically constipated. It limits the expansibility of the anal orifice. In nearly all cases of internal piles two characteristic symptoms, due to the presence of the pecten band, manifest themselves. One of these is difficulty in completely emptying the rectum during defaecation, and the other is diminished calibre of the faeces voided. Both these symptoms disappear when the band has been divided. The limiting effect of the pecten band upon the degree of relaxability of the external sphincter muscle is responsible for the straining at stool during the passage of formed motions and also for strangulation of piles when a large mass has become prolapsed through the anal orifice. Such a strangulation is usually said to be due to spasmodic contraction of the internal sphincter muscle under the stimulus of painful protrusion, but as no muscle is capable of keeping up tonic contraction for an indefinite period without relaxation, such an explanation is unsatisfactory. Miles's idea of the pecten band supplies a more probable explanation. It is this band which some operators rupture in their operations on piles when they "forcibly dilate the sphincter." Presumably better results would be obtained if the band were cleanly divided with the scalpel.

PROGRESSIVE LENTICULAR DEGENERATION OR WILSON'S DISEASE.

There is a considerable feeling in this country against applying the describer's name to a disease or syndrome, however desirable it may be to pay due honour. It may be remembered that the name Addison's disease was given by Trousseau, and that the term Barlow's disease (infantile scurvy) was made in Germany. Although cases had been previously described by Homén, Ormerod, Gowers, and Anton, the fullest account and the name "progressive lenticular degeneration" were given in 1912 by Dr. S. A. K. Wilson to the association of special nervous symptoms with a hobnailed cirrhotic liver and bilateral degeneration of the lenticular nucleus. The application of the title "Wilson's disease" to this condition is a possible source of future confusion, as there has been another Wilson's disease — exfoliative dermatitis, called after the late Erasmus Wilson. There are, it may be noted in passing, more than one Paget's disease (of the nipple, and of bones), and the term von Recklinghausen's disease refers to at least two different conditions (multiple neurofibromatosis and osteitis fibrosa osteoplastica). Campbell Howard and Royce[1] now describe a fresh case of progressive lenticular degeneration with cirrhosis of the liver presenting some special features of interest, and point out that since 1912, when Wilson collected eleven cases, there have been twenty-six fresh examples, of which thirteen have been reported by American neurologists. This patient was a male, aged 22 years, and clinically was thought to be suffering from pluriglandular insufficiency. The disease ran a shorter course than hitherto recorded; redness and oedema of the hands and the phenomenon of perseveration, by which is meant the tendency to grasp various objects spasmodically, were noted, but except in Mills's report these manifestations have not previously been recorded. There was bilateral symmetrical cavitation with atrophy of the lenticular nucleus, involving, though to a less extent, the internal capsule and optic thalamus. Wilson inclined to emphasize the limitation of the change to the putamen and globus pallidus of the lenticular nucleus and to the caudate nucleus, but later reports, like the present, have described involvement of the internal capsule and optic thalamus. The resemblance to the pseudosclerosis described by Westphal and Strümpell is pointed out, and attention drawn to the group of cases of pseudosclerosis with hepatic cirrhosis, annular yellow pigmentation of the cornea, and nervous lesions. In his recent review of the extrapyramidal symptom complex Dr. F. M. R. Walshe[2] covers this ground more fully, and states that Wilson's work on progressive lenticular degeneration has brought out the physiological significance of the group of diseases including (*a*) juvenile familial forms, pseudosclerosis, progressive lenticular degeneration and juvenile paralysis agitans, and (*b*) non-familial forms occurring in later life, paralysis agitans, and Förster's arteriosclerotic muscular rigidity.

THYROID INACTIVITY IN GIRLS.

Those who are interested in tracing the beginnings of disease will find a subject for observation and meditation in the signs of hypothyroidism or incipient myxoedema which, it is said, are often to be found, if looked for, in girls at or about the period of puberty. It is suggested that variations in the quantity, and possibly in the exact nature, of the thyroid secretion may explain much that seems purely erratic in feminine behaviour, behaviour that led the mediaeval philosopher to remark that "la gente nymphe est fantasque et mobile." At puberty in woman the thyroid gland enlarges and its secretory activity increases. It would appear that the tendency is less often to under-action than to over-action. Determining symptoms of hyperthyroidism are evidenced by extreme impressionability, a full glistening eye, a tendency to attacks of faintness, marked emotivity, and an easily provoked fine tremor. In a certain proportion of subjects the opposite occurs. The thyroid apparatus has fulfilled all requirements up to the age of puberty, but the sudden increased demands on its activity at puberty may determine in the girl more or less obscure signs of thyroid insufficiency, so that instead of the nervous irritability

[1] C. P. Howard and C. E. Royce, *Arch. Int. Med.*, Chicago, 1919, xxiv. 497.
[2] F. M. R. Walshe, *Medical Science, Abstracts and Reviews*, 1919, i. 209-13. Published for the Medical Research Committee by Humphrey Mitford, Oxford University Press.

characteristic of over-thyroidism, we get the sullen demeanour of incipient myxoedema, and, if prolonged, the tendency to infiltration of the integument, coldness of the extremities, chilblains, and loss of hair. An interesting observation of this condition of hypothyroidism forms the subject of a lecture by Dr. P. Nobécourt,[1] in which he says that the physiological problems of puberty in girls afford a rich field of observation. Double interest attaches to thyroid insufficiency, because the problem is therapeutical as well as pathological, and the shortcoming can be remedied by very simple means. In his opinion, whenever there is an abnormal predisposition to chilblains associated with a loss of intellectual acuity at or about puberty, thyroid insufficiency should be suspected and further evidence looked for.

HOME SERVICE AMBULANCES.

THE Home Service Ambulance Committee of the Joint Committee of the British Red Cross and the Order of St. John has now allotted 300 ambulances to county directors and has been able to deliver 213. Forty-six ambulances are in hand to meet this deficit, and an order has been placed with the Ford Company for 55 chassis; the date of delivery is uncertain, but the work of building ambulance bodies for them is in hand. The Commissioners of Customs and Excise have, in response to the representations of the committee, agreed that the motor spirit used for the ambulances shall be exempt from the payment of duty. The committee has taken out a policy of insurance against the risk arising from accidents to patients or to passengers in the ambulances, and risks to drivers and third parties are provided for by insurance policies taken out by county directors. Satisfactory reports continue to be received as to the working of the ambulances. The last quarterly report shows that 418 patients were carried in 66 ambulances, an average of 21 patients to each ambulance. The average distance covered was 14 miles for each patient.

THE DUM-DUM CHARGES.

DURING the autumn of 1914 the Germans put about a charge against the Allies of using dum-dum—that is, soft-nosed—bullets, but after a month or two this was dropped. An explanation of the circumstances is given in a review of a book by H. Binder, published in the *Times Literary Supplement* of December 4th. Herr Binder was a Bavarian official war correspondent with the German Supreme Command. He says that when the Germans got into Longwy on August 26th, 1914, they found a quantity of small arms ammunition with a cylindrical recess in the nose of the bullet. The Kaiser telegraphed to President Wilson, and the war correspondents who were summoned to see the ammunition set out the accusation in their correspondence. It was soon discovered that the ammunition was made for practice firing on a short range. Major Nikolai, however, the head of the Press Bureau and of the Secret Intelligence Section, refused to admit this, and presently assembled the war correspondents and military attachés to see some English rifles with a special attachment, which, he said, was designed for nipping off the point of the bullet so as to render it flat and disposed to mushroom on impact. It was immediately pointed out by the American Attaché and a German pressman that the so-called nippers were side brackets for a telescopic sight. Major Nikolai would not accept the explanation, and further appeals to the civilized world against the barbarous methods of the Allies were made by the German authorities. It was then ascertained that the only really soft-nosed bullet in use was that of the German army revolver, though the British was also under suspicion, and that only two in 10,000 wounded had wounds which might be due either to soft-nosed bullets or to hits at very close range. "In November, 1914," says Herr Binder, "the war correspondents received strict orders not to refer to the dum-dum affair again." It appears, therefore, that the German General Staff made their charge through ignorance, but rather than admit a mistake persisted in it for several months. According to the same authority no accurate lists of German casualties were issued after January 11th, 1918; to that date 1,315,728 men, including 42,205 officers, were reported as killed. Down to January 11th, 1917, the lists of wounded totalled 2,291,681, and prisoners 502,676. After the dates mentioned the lists were only calculated by averages, and our contemporary considers that Herr Binder's estimate of 1,600,000 dead is under the mark; in any case it does not include deaths from disease.

[1] *Le Monde Médical*, October, 1919.

MOSQUITOS AND YELLOW FEVER.

WE have given from time to time during the last few months an account of the remarkable researches into the etiology of yellow fever carried out by Noguchi in Guayaquil, Ecuador. In the most recent instalment[1] of the report of his work he describes experiments showing that mosquitos can convey the disease from yellow fever patients to animals and from infected to non-immune animals. The larvae of *Stegomyia calopus* were collected, and the imagines fed on the arm of a yellow fever patient; after an incubation period of twelve days the mosquitos were able to infect animals; whereas mosquitos fed on the infected blood of a guinea-pig were found to be capable of transmitting the disease after an incubation period of eight days; this discrepancy is explained by the fact that there are far more *Leptospirae icteroides* in experimentally infected guinea-pigs than in the blood of yellow fever patients. But transmission of infection often failed, and it appears that in natural circumstances the percentage of mosquitos infected with *Leptospira icteroides* by sucking blood from a yellow fever patient must be very small; a female mosquito takes up 0.01 c.cm. of blood, whereas Reed and Carroll found that to transmit yellow fever from a patient to a non-immune person it is necessary to take from 0.1 c.cm. to 2 c.cm. of blood at the height of the disease. *Leptospira icteroides* is one of the most fragile of all the pathogenic parasites, and cannot survive the concurrence of bacteria; in the comparatively aseptic body cavity of the stegomyia it is safe. Whether or no *Leptospira icteroides* can survive and multiply only in the body of *Stegomyia calopus* has not been determined.

[1] H. Noguchi, *Journ. Exper. Med.*, Baltimore, 1919, xxx, 401-410.

THE SOCIETY OF APOTHECARIES.

THE Society of Apothecaries, famous for its hospitality, held a Lord Mayor's Day dinner on December 9th, after an interval of several years. The Master, Mr. Samuel Osborn, F.R.C.S., was supported by a distinguished gathering of members and guests, including the Lord Mayor and Sheriffs of London, the Presidents of the Royal Colleges of Physicians and Surgeons, the Director-General A.M.S., Sir George Newman, K.C.B., Sir Walter Fletcher, K.B.E., Sir W. Arbuthnot Lane, Bt., and the Masters of several City Companies. The ancient hall of the Company forms a delightful setting for such occasions, and features of the entertainment were the string quartets and quintets, played in the minstrel gallery during dinner, and the subsequent singing of Miss Violet Openshaw and Mr. Ivor Walters. After the loyal toast had been honoured, the Master proposed the health of the Lord Mayor and Sheriffs, recalling to the members that their Society was founded over 300 years ago. The Lord Mayor, in his reply, took pride in being the next best thing to an Apothecary, namely, a Barber, and rounded off his speech with an apt reference to the juryman chemist in *Pickwick*. Colonel B. B. Connolly, C.B., proposed in warm terms the toast of the Navy, Army, and Air Forces. Lieut.-General Sir John Goodwin, K.C.B., in responding, wished to associate himself with the rank and file of the army, who, he said, know and appreciate their debt to the

medical profession during the past five years; the British soldier, he added from lifelong knowledge, is never depressed by adversity beyond the power of recovery. The health of the guests was proposed by the senior warden, Sir Shirley Murphy, K.B.E., F.R.C.S., who reminded his hearers that the Society of Apothecaries is the only medical corporation within the City of London. Looking towards the future, he expressed the hope that City Companies would continue to encourage research and education, and paid a compliment to the epoch-making writings of Sir George Newman and the fruitful investigations carried out under the inspiration of the Medical Research Committee and its secretary. Sir Norman Moore, Bt., P.R.C.P., responded to the toast in his happiest manner, touching on the close relations and good feeling between the Royal College of Physicians and the Society of Apothecaries. Sir Theodore Mayerne, whom he described as the first to write regular clinical notes, and Dr. Henry Atkins, the President of the College, urged upon King James I the foundation of the Society; and so it came about that the Apothecaries parted company with the Grocers, became independent, and have ever since flourished. The toast of "The Society of Apothecaries: root and branch, may it flourish for ever!" was entrusted to the junior warden, Dr. W. F. R. Burgess, who began by claiming that, though born in 1616, their society is as young as ever, and went on to poke fun at some modern innovations that are regarded as evidence of progress. The health of the Master was proposed by Sir George Makins, G.C.M.G., P.R.C.S., who spoke of their long acquaintance since student days, and of Mr. Osborn's pioneer services to the Red Cross, both by teaching and by practice. The Master, in a brief reply, entered a plea for needy ex-service medical officers and their dependants.

THE BELGIAN MEDICAL PROFESSION.

AT the Royal Society of Medicine on Monday next, December 15th, Dr. Pechère, President of the Belgian Committee for the assistance of doctors and pharmacists in Belgium during the German occupation, will give an account of the hardships they underwent and of the success of the efforts made to relieve their unhappy condition. The chair will be taken at 5 p.m. by Sir Rickman Godlee, chairman of the Belgian Doctors' and Pharmacists Relief Committee formed in this country in November 1914.

WE learn that Sir William Osler, who is suffering from a severe attack of influenza, shows some improvement as compared with last week, but his condition still causes anxiety to the medical colleagues in attendance.

Medical Notes in Parliament.

The Demobilization of Doctors.—Mr. Lyle asked the War Secretary, on December 3rd, what steps his department was taking to replace the older doctors in the Royal Army Medical Corps by younger men who had just left hospital, especially in view of the fact that most of the older men left their practices in order to serve the country for the duration of the war. Mr. Churchill replied: The older doctors who wish to be demobilized are being released as rapidly as possible, as establishments are reduced or substitution by younger men who have signed the new contract is effected. Any newly qualified medical man who desires to serve in the R.A.M.C. is given a six months' commission, provided he is fit for general service and under 45 years of age, but I regret that the number of those electing to serve has not up to the present been as large as was hoped.

The Remuneration of Pensions Medical Officers.—Mr. J. Johnstone asked the Pensions Minister, on December 3rd, whether he was aware that much dissatisfaction existed among the salaried medical officers employed by the Ministry regarding their rates of remuneration; whether medical officers holding administrative positions, such as deputy commissionerships, and other full-time medical officers, were receiving a lower rate of remuneration than the medical officers employed by the session, and whether he would remedy this state of affairs. Major John Edwards asked whether medical officers on special duties at the Ministry of Pensions Municipal Board had had their rates of pay raised by 50 per cent. since October 6th; whether the Minister was aware of the dissatisfaction felt by the remainder of the medical staff who were employed on other duties on a sessional basis because they had not been given a similar increase in remuneration, and that the salaried whole-time officers were thereby put in a position of financial inferiority to those who were working even four days a week on a sessional basis at the revised salaries. Sir L. Worthington-Evans said the medical officers employed by the Ministry might be assured that the matters referred to in the question were receiving consideration.

Pensions Supplementary Estimate.—The House of Commons on December 9th agreed to a supplementary pensions vote of £32,044,000. Sir L. Worthington-Evans said that the increases were in considerable measure due to the fact that the army had been so rapidly demobilized, as thus a larger number of men were coming into pensions within the year. In regard to the medical services he mentioned that there had been an increase in the cost of treatment and allowances to men undergoing treatment amounting to £10,000,000.

The Training of Disabled ex-Service Men.—In answer to questions put by Captain Loseby, on December 3rd, Sir Robert Horne stated that the number of names on the list of disabled ex-service men awaiting training was about 20,000. The object of the training was to enable the men to be absorbed in skilled industries at standard rates of pay. Men who were waiting were entitled to unemployment donations, together with disability pensions. He was not aware that, as a general rule, serious delays now occurred either in giving decisions on applications for training grants or in making payment by monthly instalments of the grants awarded for maintenance.

Mortality Rate from Pulmonary Tuberculosis.—Lord Robert Cecil asked the Minister of Health, on December 8th, what was the mortality rate due to phthisis during the year before the Insurance Act was passed, the year before the war, and last year. Dr. Addison said the rate for England and Wales in the years named was as follows:

Year.	Death Rate.
1910	1.015
1913	1.004
1918	1.343

The figure for 1918 was based upon figures of the civilian deaths and civilian population only; and regard must be had to varied considerations before drawing any inference from it as compared with the figures given for 1913 and 1910.

National Insurance: Medical Benefit.—Lieutenant-Colonel C. Lowther asked the Minister of Health, on December 8th, whether evidence could be produced to show that the panel service had improved the health of the nation. Dr. Addison replied that the working of medical benefits under the Insurance Act had been scarcely eighteen months in existence when war broke out, and the disturbing effects of war conditions which had prevailed over the greater part of the period during which it had been in operation made it impossible to produce concrete evidence which would measure the improvement in the health of the nation due to the Insurance Medical Service. Lieut.-Colonel Lowther asked whether the Minister of Health could indicate what amount of money was required to give the whole community an efficient medical service. Dr. Addison said that if by that was meant a complete system of medical services of the different kinds needed for the varied requirements of the whole community, he could not at the present moment hazard an estimate of the cost.

National Insurance Amending Bill.—Mr. Kiley asked the Prime Minister, on December 4th, when the bill would be introduced to amend the National Insurance Act. Mr. Lloyd George replied that the question was now under consideration by the Government, and he therefore could not make any statement at present.

Provision for Additional Sanatoriums.—A vote was passed on December 10th for £10,000 for expenditure in respect of employment exchanges in connexion with the Ministry of Labour. Mr. Baldwin, Secretary to the Treasury, explained that the vote came under this heading only in a technical sense, and that it was really to provide additional sanatoriums. Great anxiety had been felt by the Ministry of Health and the Ministry of Pensions as to the position of tuberculous discharged men, for whom the accommodation in the country was insufficient. The sum to be voted was the sum which the Office of Works estimated would have to be spent in making additional sanatoriums between the present time and the end of the current financial year. The whole scheme, which could be discussed later on the vote for the Ministry of Health, would involve an expenditure of something like a quarter of a million; army huts would be used. At the expiration of a period of five years the local sanitary authorities would have the option of taking over the building and equipment on very favourable terms.

Mental Deficiency and Lunacy (Amendment) Bill.—This measure was considered in committee on December 4th, and reported without amendment. It was read a third time on December 5th.

Scotland.

An investiture was held in the throne room of Holyrood Palace, Edinburgh, on December 4th, by Prince Arthur of Connaught, acting as the representative of the King. Three hundred presentations were made.

The Scottish Board of Health held an examination last month for trained sick nurses and fever nurses. The examinations were held at Glasgow, Edinburgh, Dundee, and Aberdeen, and 283 candidates presented themselves. The subjects of examination were elementary anatomy and physiology, hygiene and dietetics, medical and surgical nursing, midwifery (for Poor Law and general trained nurses only), and infectious diseases (for fever trained nurses only). The number of candidates who obtained the certificate in general training was twenty-five, and the number who obtained the certificate in fever training was forty.

An East of Scotland Overseas Medical Club has been formed to encourage friendly intercourse and promote the spirit of comradeship and mutual help amongst medical men who have served on a foreign front during the war. The first general meeting and annual dinner will be held in Edinburgh in January, 1920, when Sir Henry M. W. Gray, K.B.E., C.B., C.M.G., will be in the chair. Application for membership and inquiries should be addressed to the honorary secretary and treasurer, James Young, D.S.O., M.D., 29, Manor Place, Edinburgh.

The New Rector and the New Institute, St. Andrews.

The students of the University of St. Andrews have elected Sir James Barrie, Bt., to be rector of the university for the next three years. Sir James Barrie was born at Kirriemuir, some fifteen miles north of Dundee, and therefore not far outside the Neuk of Fife. Kirriemuir was doubtless the scene of *A Window in Thrums*, by which he first became well known to the general reader. He received his education at Dumfries Academy and the University of Edinburgh, where he graduated M.A., so that both the West and the East can claim him. He has appointed Dr. William Low to be his assessor on the University Court. Dr. Low, as he said, has now been the representative of three successive rectors—the Marquess of Aberdeen, a distinguished statesman; Earl Haig, a great soldier; and Sir J mes Barrie, a man of letters. In view of the increased number of medical students, certain alterations at the Bute Medical Buildings, St. Andrews, to provide additional accommodation, have been sanctioned. The Court referred to the Senatus Academicus a proposal to establish lectureships in biological chemistry and bacteriology in co-operation with the recently incorporated St. Andrews Institute of Clinical Research. This institute has been founded by Sir James Mackenzie, and we purpose very shortly to publish an address in which he gives an account of its aims. The Court nominated Principal Mackay and Dr. Barrie Dow for appointment as members of the Consultative Councils under the Scottish Board of Health.

The Edinburgh Obstetrical Society.

Dr. William Fordyce has been elected President of the Edinburgh Obstetrical Society. The retiring president, Sir J. Halliday Croom, delivered his valedictory address. He pointed out that though the art of practical obstetrics has made great strides in late years, 3,000 women or more die from the diseases and accidents of childbirth every year in England and Wales. Much of this mortality would be saved if all patients could be treated in lying-in hospitals under an expert. Though this ideal was, meanwhile, unobtainable, it should be kept continually in mind. In addition, there were, he said, some problems in midwifery which await solution—for example, the toxaemias of pregnancy, which are responsible for a large part of the death-rate. The importance of prematernity care was emphasized, and it was urged that the present system, by which a patient was admitted to hospital only after the onset of labour, was bad. The attractiveness and the great value to the community of child welfare work was referred to. Reference was made to the losses the society had sustained by death during the war. Tributes were paid to Sir A. R. Simpson, Professor Stephenson of Aberdeen, and Dr. E. Scott Carmichael.

The Bellahouston Hospital.

The Scottish National Red Cross General Hospital at Bellahouston has been taken over by the Ministry of Pensions. Sir George T. Beatson, who presided at the ceremony, said that the hospital was erected in 1915 by the people of Scotland for the benefit of sick and wounded soldiers. The military authorities having ceased to need it, it had been decided to hand it over to the Ministry of Pensions without fee or reward. Sir James Craig, Parliamentary Secretary to the Ministry of Pensions, said that it was with a grateful heart that the Ministry of Pensions took over from the Red Cross Society what had been described as the most perfect hospital building in the United Kingdom. The task of the Pensions Ministry was gigantic. When the armistice was signed it was at once faced with increased responsibility, owing to the demand for immediate demobilization. Its mail now reached the extraordinary figure of 400,000 letters a week. The pensions of all grades—men, widows, and dependants—numbered over two millions, and the annual cost to the State next year would be something like £105,000,000. He could say with confidence that out of the two million pensioners 1,900,000 were satisfied with their pensions. The proceedings closed with a vote of thanks to Sir James Craig, proposed by Sir Hector Cameron.

Two Jubilees.

The medical profession in Inverness and the neighbourhood recently presented illuminated addresses to Dr. Brodie Cruickshank of Nairn and Dr. Duncan Macfadyen of Inverness, congratulating them on the completion of fifty years of practice. The presentation was made at a dinner in Inverness at which Colonel Munro Moir, M.D., presided, and at which the Provosts of Inverness and Nairn were guests. Of Dr. Cruickshank the chairman said that after graduating at Aberdeen he had served at Murthly Asylum and afterwards in the army, and had then settled in Nairn; and of Dr. Macfadyen, that after graduating at Glasgow and practising at Dalmally, Ullapool, and Beauly, he had been a citizen of Inverness for five-and-thirty years. For many years he had been the popular medical officer of the Inverness-shire Militia. The toast to the two recipients was pledged with Highland honours, and acknowledged by them; both referred to the change which had come over surgery through Lister's work. Dr. Macfadyen said that when he was a dresser to Lister in Glasgow he was in the early stage of his experiments, and was treating wounds with a putty composed of whiting, carbolic acid, and oil, which the dressers had to prepare themselves.

The Medical Guild.

The annual meeting of the Medical Guild was held in Edinburgh on Saturday, December 6th, with Dr. John Playfair in the chair. In opening a discussion on a State medical service the chairman said that whether they liked it or not there was little doubt but that in the near future the profession would be faced with a State medical service. One of the principles of the guild was that it was willing to accept such a service provided it were limited strictly to necessitous classes. There was a fear, however, that the service proposed by the Government would be of much wider scope than that which they would approve. It might in the end embrace the whole community, including hospitals and all institutions in any way connected with maintaining the health of the people. A sweeping measure of that kind would, among other disadvantages, tend to reduce all professional activities and attainments to a dead level; would emphasize and increase all the weaknesses of the National Insurance Act. Professor William Russell said that the heads of departments were striving for more power and authority. The department which dealt with public health was contemplating bigger schemes than anything they had hitherto had; it was striving to be the bureaucratic autocrat of a servile profession. What right, he asked, had a democratic State to interfere with the relations between man and man, or between the public and the medical profession? Dr. E. Duncan (Glasgow) expressed grave suspicion as to the Government's intentions in the near future. It was high time that the profession of medicine insisted on

having its rights conserved, and resisted in every possible way the institution of a service that would divorce the private practitioner from his patient. The discussion was continued by Dr. A. Blackhall-Morison (London), Dr. A. Thomson (Glasgow), and Mr. J. W. Dowden, Dr. F. Porter, and Dr. J. Stevens.

Ireland.

ULSTER MEDICAL SOCIETY.

AT the third meeting of the Ulster Medical Society, on the afternoon of December 4th, when the President, Mr. Andrew Fullerton, C.B., C.M.G., F.R.C.S., was in the chair, the Honorary Secretary read a letter from Sir James Mackenzie thanking the society for his election as an honorary Fellow.

Chronic Intestinal Stasis.

Sir William Arbuthnot Lane then gave an address on "The evolution of disease," founding his remarks upon a condition which he has been studying for many years—"abnormal delay in the passage of intestinal contents." To this condition he first gave the name "chronic constipation," but changed it later to "chronic intestinal stasis," signifying by the latter term the initial constipation, together with the resultant changes in the intestinal tract. He enumerated the changes occurring in the whole length of the alimentary tract owing to a primary accumulation of faecal matter in the lower end of the large bowel; the strain primarily affected the pelvic colon, causing its elongation and the development of kinks at its proximal and distal parts; this affected the passage of faeces along the large intestine, which reacted upon the caecum, appendix, and ileo-caecal junction; inflammation ensued with the development of adhesive bands, "control appendix," and ileal kinks. The mechanical effects of obstructions thus formed reacted upon the duodeno-jejunal junction and duodenum, causing dilatation of the latter, with abrasion and ulceration of its mucous surface and spasm and ulceration of the pylorus, which might ultimately end in cancer; the point of greatest strain in the stomach was next attacked—namely, the mid-point of the lesser curvature, resulting in ulceration, stricture (hour-glass stomach), and possibly cancer. Ulceration of the stomach could produce cardiospasm and disease of the oesophageal wall. The main result of this disastrous sequence was imperfect drainage, which had been proved in the experimental laboratory to end in degeneration and finally death of the tissues.

The lecturer then stated that the delay in the absorption of nutritive material, combined with the decomposition of faecal contents, could affect practically every organ in the body. The principal bacteria found in the faeces were streptococci and colon bacilli; these might first reach the liver and gall bladder through the common bile duct, or the blood stream (portal vein) causing inflammation of the gall bladder, gall stones, etc.

The pancreas was prone to undergo either an acute inflammation, or a more chronic process resulting in the formation of cysts, calculi, or cancer, owing to direct extension along its ducts from the duodenum. After the liver, the kidneys bore the chief stress of the condition, as these organs assisted in the elimination of abnormal toxins or organisms. In some cases the organisms, especially *Bacillus coli*, might be passed without any visible disturbance, but in others various forms of Bright's disease or even acute renal abscesses would result.

The organs of generation were also affected; the ovaries were wasted and shrunken and the uterus small or infantile in type, even in women who had borne children. The thyroid gland showed changes, being at the outset enlarged, but later small and impalpable; in this connexion attention was drawn to the recent researches of Colonel McCarrison on the relation between goitre, Graves's disease, and auto-intoxication from the intestinal tract.

The pituitary and suprarenal glands also underwent degeneration, the pigmentation occurring in advanced cases being evidence of disease of the latter; there might even be symptoms of Addison's disease, which cleared up after colectomy. The breasts also participated in the changes, becoming hard and knotty and showing small cysts; these degenerated breasts were peculiarly liable to cancerous changes.

The tongue is usually unhealthy, large, flabby, and indented by the teeth. The teeth decayed early, and pyorrhoea might be present. Many changes in the nervous system were ascribed as due to this defective drainage, among them headache, with otherwise unaccountable vomiting, neuralgias, rheumatic pains, bad dreams, insomnia by night but somnolence by day, marked depression amounting almost to melancholia, irritability, fits of violent temper, or marked introspection; when children were the victims, they are usually stupid, dull, and inattentive. Taste and smell were apt to be blunted, and in the eye degeneration of the lens and loss of power in the ciliary muscle might occur. The perspiration might be abundant and offensive, but the temperature was usually subnormal, the ears, finger-tips, and toes being cold and livid, almost resembling Raynaud's disease. There was usually a loss of fat, which might lead to prolapse of the viscera, with all its attendant evils; in the intestine this produced a vicious circle, the prolapse favouring still further stagnation. Both voluntary and involuntary muscles show loss of power, resulting in lateral curvature, flat-foot, the different versions and flexions of the uterus, and degeneration of heart muscle. Many other diseases were enumerated as being the result of chronic intestinal stasis, among them rheumatoid arthritis, Still's disease, angina pectoris, non-syphilitic arteritis obliterans, pernicious anaemia, paralysis agitans mucous colitis, etc. These diseases, it was held, were due to an infection of the tissues, which could not have gained a foothold in the patient unless the vitality of the tissues had been previously lowered by intestinal stasis.

A hearty vote of thanks to Sir W. Arbuthnot Lane, proposed by Professor Sinclair and seconded by Mr. A. B. Mitchell, was carried unanimously.

Annual Dinner.

The annual dinner of the Society was held on December 3rd in the Medical Institute, Belfast; ninety-four Fellows and Members with their guests were present. The President of the Society acted as host. After the President had given the toast of "The King," he proposed the health of Sir William Arbuthnot Lane, who was introduced as an Irishman by descent, connected with both North and South. Sir Arbuthnot Lane, in reply, thanked the President and members for their cordial welcome. The toast of "The Dublin Medical School" was proposed by Professor Lindsay, M.D., F.R.C.P., who dwelt on the friendly relations which had always existed between the medical schools of Dublin and Belfast. Professor Craig, President of the Royal College of Physicians of Ireland, Mr. Story, President of the Royal College of Surgeons, and Sir Thomas Miles responded. The toast of "The Belfast Medical School" was proposed by Sir William Arbuthnot Lane and acknowledged by Professor Sir John Byers, who gave some interesting facts regarding the growth of the Medical School and the advance of medicine in Belfast. Mr. R. J. Johnstone, F.R.C.S., proposed the health of the President, who, in responding, proposed that of the Honorary Secretary, Dr. C. G. Lowry, F.R.C.S., upon whom the arrangements for the evening had devolved, and congratulated him on the success of his labours.

England and Wales.

TUBERCULOSIS IN WALES.

THE King Edward VII Welsh National Memorial Association was founded in 1910 through the munificence of Major David Davies, M.P.; it received a Royal Charter in 1912. In 1910 there were in Wales and Monmouthshire 31 beds reserved for the treatment of tuberculosis. The Memorial Association now owns 976 beds; in addition it controls 107 beds, and rents from other authorities 101 beds. It possesses hospitals and sanatoriums for the treatment of surgical as well as pulmonary tuberculosis. There are fourteen central dispensaries and nineteen visiting stations. The whole-time medical staff numbers twenty-two, and the consulting surgeons are Major-General Sir Robert Jones and Colonel Sir J. Lynn-Thomas. Some 3,000 discharged service men have been

referred to the medical officers of the association and some 2,000 have received institutional treatment; at the present time 200 beds are so occupied. The institutions have been built and equipped out of moneys provided by voluntary gifts, supplemented by grants under the National Insurance Act. The total expenditure on building, etc., has been £220,000, towards which Government grants to the amount of £52,000 have been made.

BRISTOL MEDICAL SCHOOL.

The annual dinner of the Bristol Medical School, which has been in abeyance during the war, was held last week under the presidency of Dr. R. G. Poole Lansdown. About 160 past and present students attended, including ladies for the first time. Sir Anthony Bowlby was the guest of the evening and congratulated the school on its war work and the honours which had been awarded to past students —namely, C.B. to two, C.M.G. to four, C.B.E. to six, D.S.O. to seven, O.B.E. to seven, D.S.C. to one, and M.C. to eleven. The Dean of the Faculty stated that the Bristol Medical School was now one of the largest, if not the largest, of the schools in the provinces.

MEDICAL TREATMENT OF LONDON SCHOOL CHILDREN.

During the current year the London County Council arranged for the treatment of 29,640 cases of eye defects. Increased facilities are to be provided at some of the centres, and four new ophthalmic departments are to be established, bringing the total provision for next year up to 31,645 cases; the provision for treatment of throat defects and defects of ear and nose is to be raised from 14,400 to 15,845 cases. The total provision for dealing with ringworm is at present 2,138 cases; it is to be raised to 2,490 cases, although, since arrangements were made for the treatment of ringworm by x rays in 1911 the number of cases has fallen to less than half the figure at which it stood in that year; the number has, however, slightly increased during 1919. Five new centres for the treatment of minor ailments had been authorized for the present year, but only one has actually been opened. About twelve further centres will be required, but only five of these, in addition to the centres already authorized, will be provided next year. The total provision for minor ailments will be for 45,760 cases. The number of dental cases for which treatment has been provided this year is 96,630; the total provision for next year will be for 113,520 cases. The special remedial exercises centre established in Hampstead has proved to be of considerable value in dealing with special cases of curvature; a second has been organized in Woolwich, and a third is projected in Southwark. In future the Council's school medical officers will pay regular monthly visits to these centres. The cost of all these arrangements for medical and dental treatment will be £71,815, together with £600 for the appointment of additional assistant organizers and £3,000 for the employment of temporary nurses. The allowances granted for the supply of apparatus are also to be increased from 33 to 50 per cent. Arrangements have been made for the medical inspection of all pupils in the Council's secondary schools and of scholarship holders in secondary schools aided by the Council; the question of the treatment of fee-paying pupils is still under consideration.

VENEREAL DISEASES CLINICS IN LONDON.

The number of cases attending the venereal diseases clinics of the London County Council so far during 1919 represents an increase of 50 per cent. on the corresponding period of 1918. It is thought that the increase has been due to the combined influences of demobilization and better public knowledge of the clinics. A communication is to be addressed to the hospitals concerned drawing attention to the importance of making every effort to deal with the pressure by the provision of additional staff, equipment, and accommodation, and informing the authorities that, in the event of satisfactory arrangements being made at the earliest possible moment, the question of additional cost arising therefrom will receive the sympathetic consideration of the Council.

IT is stated that Queen's medical faculty, now established at Kingston, Ontario, may be removed to Ottawa owing to lack of hospital facilities.

Correspondence.

TREATMENT OF MALARIA.

SIR,—The discussion on the treatment of malaria held at the Medical Society of London on November 24th and reported in your last issue (p. 743) formed a most interesting and profitable contribution to this difficult subject.

After a very extensive experience of the treatment of a large number of malarial cases during the three years 1916-19 in Mesopotamia as consulting physician to the expeditionary force I formed the following conclusions:

The method of administration of quinine is most important, and from experience of a great number of cases in which the drug was given in various ways I am of opinion that the intravenous method is that by which the greatest therapeutic effect is obtained. Closely following this method is the intramuscular injection and, *longo intervallo*, administration by the mouth and rectum. The therapeutic values of quinine bihydrochloride when given rectally, orally, intramuscularly, or intravenously for a given dose would in my opinion be approximately represented by the figures 1, 2, 20, and 40—for example, 5 grains given intravenously would be equivalent in therapeutic value to 100 grains given by the mouth.

The subcutaneous administration of quinine is liable to be followed by necrosis and suppuration, and should, I think, be avoided.

The choice between intravenous and intramuscular administration would depend in many cases on the presence of easily accessible veins suitable for intravenous injections. If there is difficulty in this respect it is wiser to adopt the intramuscular method.

In tropical countries acute diseases, such as influenza, enteric, typhus, relapsing fever, heat hyperpyrexia, sandfly fever, etc., are very commonly complicated by malaria, the clinical evidence being marked enlargement of the spleen, in addition possibly to a history of malaria. The combination produces an acute and dangerous condition, and in such cases it is most necessary that quinine bihydrochloride should be given intravenously or intramuscularly without delay, since by this means a serious and often fatal complication is quickly abolished.

In cases of malignant malaria and in recurring malaria of the benign tertian or quartan type with splenic enlargement I am strongly of opinion that courses of treatment should commence with from three to six intravenous or intramuscular injections of quinine, and treatment carried on afterwards by oral administration—for example, 10 grains of quinine bihydrochloride in solution three times a day for a fortnight, and then "after-treatment" on the lines laid down in the pamphlet issued by the Ministry of Health, written by Sir Ronald Ross, K.C.B., F.R.S., and Lieut.-Colonel S. P. James, I.M.S. Much better results are obtained by this method and relapses are much less frequent.

In cases of malaria presenting acute cerebral symptoms the administration of quinine intravenously is of as much urgency as is the application of surgical measures in a case of fulminating appendicitis. A delay of a few hours may mean the death of the patient.

As regards the dose for intravenous injection, quantities up to 10 grains of quinine bihydrochloride dissolved in 10 c.cm. of normal saline are most suitable and sufficient. In conditions of collapse it is advisable to use larger quantities of saline—for example, 1 pint.

For intramuscular injections doses of 10 to 15 grains of quinine bihydrochloride in solution of the strength of 15 grains of salt in 2½ c.cm. of sterilized distilled water are best given deeply into the muscles of the buttock at a spot midway between the anterior superior iliac spine and the tip of the natal cleft. I have been much impressed by the toxic effect of quinine in certain patients showing an idiosyncrasy, and have notes of one patient who developed severe amaurosis following a dose of 10 grains of quinine given by the mouth on one day and 15 grains similarly given on the next day. In such cases quinine must be discontinued entirely, since there is risk of fatal blindness. The toxic effects of quinine are, in my experience, more likely to follow large doses by the mouth than those suggested for intravenous or intramuscular injection.

Before administering quinine in large doses the patient should always be questioned as to his susceptibility to toxic symptoms, and if there is any fear of this, or if the patient has not had quinine before, small doses must be given to commence with.—I am, etc.,

London, W., Dec. 8th. W. H. WILLCOX, M.D., F.R.C.P.

A Correction.

SIR,—In the BRITISH MEDICAL JOURNAL of December 6th there is an account of the discussion on the treatment of malaria which took place at the meeting of the Medical Society of London on November 20th, and in which I took part. I see it is stated that I said, "Injections of adrenalin as a means of treatment had nothing to recommend it," but this is not quite correct, for at the moment I was speaking merely of the *provocative* treatment of malaria, which has had such a vogue on the Continent. Injections of adrenalin may of course be of value in algid malaria, which has now been shown to be due to an intense infection of the suprarenals.—I am, etc.,

London, W., Dec. 8th. ANDREW BALFOUR.

PREVENTION OF VENEREAL DISEASE.

SIR,—In the face of a national menace, such as the present increase of these diseases threatens to be, it is grievous to find people objecting to any procedure calculated to lessen their incidence, and at the same time offering no alternative policy, but splitting straws as to whether personal cleanliness can be acquired after instruction, or requires scientific personal practice, or deprecating the value of prophylaxis. I am content to adopt and advocate any advice or method that will tend to lessen the probability of contracting these diseases. It matters not to me whether the word "prevent" is used in its earlier significance to "hinder," or its present sense of elimination, or that amazement means what your correspondents infer, or as the earlier use at the end of the marriage service, as long as the result is a bettering of existing conditions. Call the methods recommended for the prevention of these diseases what you like—personal hygiene, early treatment, or prophylaxis—so long as the desired end is attained.

I have no doubt but that personal cleanliness, and the use of germicides in lotions and ointments, has materially reduced the incidence of the disease in soldiers, minor or major success being due to the keenness of the medical officer, and his ability to adapt his instruction to the mental powers of his men.

In 1914 I lectured to a number of recently raised units on personal hygiene, using for a base a lecture I had given when A.D.M.S.(T.F.) in the years 1908–12; but I soon realized that the pabulum readily absorbed by the average Territorial of those days was far above quite a third of my then hearers. It was therefore a question of preserving a standard as a lecturer, or coming down to the level of the most ignorant of my hearers. When I became commandant of a military convalescent hospital I decided to go for the lower stratum; both at Alnwick with 2,080 beds, and at Ashton with 1,560, I used frequently to assemble the staff and patients in the camp theatre, and in a conversational manner place before them the danger at all times of infection, the preliminary and later technique of prophylaxis, and the vital importance, if in doubt, of at once consulting the medical officer. The results were excellent—a greater freedom of communication with the medical officer, increased use of the cleansing in the special room, and a general adoption of prophylactic remedies. Out of over 13,000 convalescents at Ashton only 26 acquired venereal disease; of these 4 contracted it from their wives who visited them, and only 2 who had used prophylaxis suffered, and in each instance the infection was contracted when on leave and drunk. In dealing with the cases acquired locally I used every means to get at the woman, and so have the fountain head treated. As to out-of-door conditions, I think your correspondents will admit that if the spots selected are sufficiently protected for the act, they are equally suitable for the prophylaxis. Personally I am of the opinion that the more prolonged coitus of the house is a greater danger for infection than the more expeditious and difficult performance out of doors.—I am, etc.,

Bletchley, Dec. 8th. P. BROOME GILES.

SIR,—As a member of the Clinical and Statistical Committees of the Society for the Prevention of Venereal Disease, I have read the letter in the BRITISH MEDICAL JOURNAL of December 6th, signed by Miss Sturge and Miss Molloy, with much interest and a certain amount of regret.

The letter is interesting, because it is of the greatest importance that the opinions of lady members of the profession—and Miss Sturge is one of the most distinguished amongst these—should be freely sought and carefully considered. But it is unfortunate that these two ladies should consider it their duty to deride the efforts of a society that desires not only to cure venereal diseases, but also to prevent their spread by methods of disinfection. Our society does not pretend that the methods advocated will suffice to stamp out venereal disease. It is quite aware that in many cases the methods will fail through carelessness, inattention to detail, drunkenness, and other causes. It is also aware that, relying upon preventive measures, some persons may even be induced to take risks that would not otherwise be run. But, in spite of all these admitted drawbacks, it must surely be recognized that preventive measures cannot but be of very great service to the individual and to the community at large. Human nature being what it is, we cannot enforce sexual continence. Why, then, should we not do our utmost to minimize the evil results which so often follow sexual irregularity? Tea-drinking is a bad habit; but must we only treat the consequent indigestion and not advise on the kind of tea and how to take it? Tobacco-smoking is a bad habit; but may we not advise upon the kind of pipe to use in order to prevent cancer of the lip? Nobody is compelled to drink tea or to smoke tobacco; but many people take the risk; and, although these instances may seem trifling, the root principle is the same, and sexual irregularities will continue in spite of all exhortations to the contrary. This being so, why should we not face the situation and, whilst condemning the practice, do our best to mitigate the result?

With nineteen years' experience of venereal disease in England, in France, and in the Far East, I can claim to have some knowledge of what I am talking about, and perhaps I am justified in asking these two ladies what experience they have had in the prophylaxis and treatment of these complaints in men? I should imagine that they have chiefly been concerned in the care of their own sex. Now our society has fully recognized that preventive treatment in women is unsatisfactory, and at our last meeting in Harley Street, in November, we had almost decided to issue no instructions to females, recognizing the extreme unreliability of disinfection in their case.

We do, however, maintain that if our procedure is reasonably followed by males of average intelligence it will produce in most cases the desired result. In this opinion we are backed up by irrefutable evidence. Were it otherwise we should not have upon our executive committee the names of many of the most distinguished members of our profession.—I am, etc.,

Manchester, Dec. 8th. A. C. MAGIAN.

SIR,—Two letters appear in the BRITISH MEDICAL JOURNAL of November 29th on the above subject, one signed by the President and Executive Committee of the Society for the Prevention of Venereal Disease, the other by the Honorary Secretary to the National Council for Combating Venereal Diseases. The former has a very simple programme—immediate disinfection, which they claim to be effective and easy, and instruction of the public in the means of applying it. I presume they refer chiefly to men, as in the case of women disinfection in this way is obviously more difficult. Anyhow their aim is definite; they state the means and stick to it. The latter appear to have no policy but that of beating about the bush. They state definitely in (2) that early disinfection diminishes the risk of infection. Apparently afraid of their attitude in (2) they state in (3) the obvious truth that abstention from exposure to infection is the only certain safeguard against the ordinary risk of disease. Then in (4) they go back to recommending everybody who has indulged in promiscuous intercourse to seek means of cleansing *at the earliest moment*, and in (5) they supply

the means, including the use of disinfectants. Yet in (8) they state that no one should be urged to arm himself in advance with a prophylactic packet. If not, why not?

It is obvious that the man with the packet is in the best position, even if he does not always make use of it for applying disinfection at the earliest possible moment, which is what the society recommends in (4). Then why not put him into that position? It is apparent that the society is hedging between a deference to sentiment and the *raison d'être* of their existence—namely, combating venereal disease. Unfortunately they cannot have it both ways. If they are out to combat venereal disease, and if they acknowledge that early disinfection diminishes it, then logically their position is to supply every means for the earliest possible disinfection. If they are out for sentiment, then let them stick to (3), and conduct a propaganda on moral grounds only.

The unanswerable argument for taking every possible means, both moral and practical, for diminishing venereal disease is that by it thousands of wholly innocent people suffer, not only those who indulge in promiscuous intercourse.—I am, etc.,

CHARLES P. CHILDE, F.R.C.S.,
Senior Surgeon, Royal Portsmouth Hospital; Chairman of the Health Committee, Portsmouth Town Council.

Southsea, Dec. 7th.

"NEW LAMPS FOR OLD" IN OBSTETRICS.

SIR,—As one of the younger generation, not yet old enough in general practice to allow of its exigencies obscuring my somewhat idealistic view of obstetrics as a science and art rather than a necessary evil, I am tempted by Dr. Mears's letter in to-day's issue to enter the lists as another of the "New Lamps." His view of things raises the fundamental question "*when are we justified in putting on forceps?*" I thought that textbooks and sound teaching had made the answer clear; and if the little word "justified" received its proper weight, that answer would assuredly not be in over 50 per cent. of cases. How many labours are instrumental because the medical attendant is pressed for time, or the patient coerces him into "taking the child from her" to escape a little pain? If every medical man attending a confinement weighed carefully the serious question of exposing his patient—whose second stage is, in the majority of cases, progressing normally if slowly—to the risks of haemorrhage, sepsis, or laceration on such justification, whilst leaving minor procedures such as hypnotics, postural treatment, or, if necessary, episiotomy, untried, there would be fewer forceps deliveries and less patching up afterwards for the gynaecologist. Nature intended childbirth to be a gradual process, allowing time for the maternal tissues to stretch; and though help is advisable and legitimate, such interference as your correspondent advocates as a routine measure is utterly subversive of Nature's efforts. Why have a mechanism of labour at all? In any case forceps delivery should be essentially a matter of manipulation and not of force, otherwise the cranioclast would be the better instrument, as sparing the mother at least from mutilation.

Dr. Mears raises a second question in advocating that the placenta be "removed immediately after the birth of the child." Does he consider this, in view of the difficulty of maintaining asepsis in the vast majority of confinements occurring in middle-class practice, to be an advance in technique upon the Credé method combined with a little patience, or an improvement on what Mother Eve had to put up with? De Lee tells us[1]: "Savage tribes and the ancients pulled on the cord, pressed on the belly, gave emetics, or tickled the nose to provoke sneezing, had the woman blow into a gourd or bottle, or into the closed fist, to evoke the abdominal pressure, or even removed the placenta by hand." No wonder that outraged Mother Nature so often retaliates, not on the medical attendant, but, alas! on the unfortunate patient.—I am, etc.,

WILLIAM CORBET,
Late Acting Assistant Master, National Maternity Hospital, Dublin.

Blackheath, S.E., Dec. 6th.

SIR,—A more appropriate title for Dr. Fairbairn's letter would be "Old Lamps for New in Obstetrics," for what is proposed is the abolition of the existing practice and its replacement by the venerable system of leaving things to nature, in the expectation that she will prove benevolent.

Normal labour is, we are told, a surgical operation, but operative interference is to be rigidly confined to making the patient surgically clean.

I am at a loss to understand how Dr. Fairbairn proposes to avoid lacerations. Certainly not by limiting the use of forceps, for, if that murderous instrument, the Simpson-Barnes forceps, be never used and modern forceps, such as Wagstaffe's, always employed, lacerations due to the passage of the head *never* occur.

For any damage done by the shoulders nature is alone responsible. Nor is it easy to believe that pain and exhaustion in labour can be abolished or lessened without gross interference with nature.

Why should a man be censured because he uses forceps in 50 per cent. of his cases? If he exercise skill and discretion, who is injured? Not a soul! On the contrary, everybody concerned is enormously benefited, and the presumed intention of capricious nature is fulfilled with perfect safety, ease, and expedition.

It is obvious to anyone with modern experience that the young woman of to-day bears pain badly and children with difficulty. Under the new-old system she is to lie, illuminated by the rays of the new lamps, for hour after hour, enduring the tortures of the damned, until nature makes up her mind to terminate the suffering. Such is modern obstetrical lore acquired during 10,000 years of recorded civilization.—I am, etc.,

London, E., Nov. 30th. A. CAMPBELL STAKK.

CHRONIC PANCREATITIS.

SIR,—I desire to express my appreciation of the value of Dr. Cammidge's work, the results of which I used to demonstrate to my students. When, in my article on "Chronic pancreatitis," in your issue of November 15th, I omitted mention of his urine test, it was because, like others, I had not found it in its present form of practical value. It depends on the presence of dextrines in the urine of pancreatitic patients, and Dr. Cammidge himself, in his letter in your issue of December 6th, indicates the difficulties in the way of arriving at a reliable decision in the test. These are that normal urines contain dextrine, the amount of which varies with the diet and with the hour of the day.

The chief point in my article is a plea for the systematic investigation of the pancreas by means of microscopic examination of an excised wedge, in cases in which pancreatitis is suspected. By that means, as in the instance of other viscera, the value of the various tests advocated, including Cammidge's urine test, will be decided.—I am, etc.,

Glasgow, Dec. 8th. JAS. H. NICOLL.

THE MEMBERS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

SIR,—The annual meeting of Fellows and Members at the Royal College of Surgeons in Lincoln's Inn Fields on November 27th last was the occasion for oratory of an unusually high order, advocating the claims of Members to some representation on the Council. During my experience of over fifteen years there have been many meetings where one speech—for example, that of the late Sir Victor Horsley—was of pre-eminent merit and the rest of average value. But on this last occasion all the speakers on behalf of the Society of Members reached a high level of eloquence and made out a very strong case for conceding our claims.

The President (Sir George Makins) evaded giving an answer to our third resolution, which had been before his Council since November, 1916. We requested him to give the meeting the present views of his Council on the old suggestion that at least two Members in general practice should join them. It would appear from his reply that even after three years' consideration the Council of the College have formed no views, either for or against the proposal. We expect to wait a year before hearing the result of their consideration of the first and second resolutions passed *nemine contradicente* on November 27th, 1919; so that no one requested Sir George Makins to put a prophet's mantle over his presidential robe.

With reference to the letter from Dr. P. I. Watkin in your last issue, I might point out that on joining our

[1] De Lee, *Principles and Practice of Obstetrics*, 1918, p. 326.

society he will soon learn that there have been many occasions on which the Council (of Fellows) has failed to defend the vital interests of both Fellows and Members who are engaged in general practice. By the Council, general practitioners, whether Fellows or Members, are equally despised and neglected.

My society welcomes new adherents who bring constructive and not disparaging criticism on its past methods. Dr. Watkin—and others like him—can be assured of full consideration of any valuable suggestions he may have to offer.—I am, etc.,

SIDNEY C. LAWRENCE,
Honorary Secretary of the Society of Members of the Royal College of Surgeons of England.

Bush Hill Park, Dec. 8th.

LOCAL CLINICAL LABORATORIES.

SIR,—The correspondents who have been making communications to you under the above heading have not dealt at all with a point in connexion with laboratory work which seems to me to be of greater professional interest than either the size or the location of the laboratory.

The chief aim of all who desire the progress of medicine must be to secure that every patient who might possibly benefit thereby should obtain the advantage of expert laboratory aid in diagnosis or treatment. For this purpose the assistance offered to the medical attendant should be such as to encourage him to make full and frequent use of it. He cannot fail to be discouraged in so doing if he finds that the pathologist whose assistance he seeks is his competitor in medical practice. It is asking too much of human nature in these hard times to expect a general practitioner joyfully to send a patient to a laboratory to have an autogenous vaccine prepared, if he is aware that the head of the laboratory is willing to accept as private patients any of the relatives or friends of such a patient who may subsequently believe themselves to be in need of similar treatment. Apart from the professional detriment that may thus accrue to the practitioner, he may not unnaturally doubt whether the limited clinical experience of his specialist brother, properly devoting most of his time to laboratory duties, will be of advantage to the patients he is thus unwittingly introducing to him.

Whether our ideal should be the local or the central laboratory (and I expect there is ample room for many more of each type), I would urge that as far as possible the specialists working therein should hold whole-time appointments and not be engaged in private practice, or if private practice is permitted or indulged in, that such practice should be of a purely consultative character, no patient being dealt with except in actual co-operation with an attending practitioner.

Working strictly on these lines, I believe that the bacteriologists and pathologists will find ample scope for useful and well remunerated work, and that we may be spared unseemly accusations of inefficiency or commercialism.—I am, etc.,

December 1st. CLINICIAN.

PHYSICAL EDUCATION AND RECREATION.

SIR,—The discussion on this subject, originated by the letter in *The Times*,[1] seems likely to be confused by the want of definition of the terms employed. Physical education of the young, as Dr. Brackenbury pointed out, is an integral part of education, and it is therefore a matter that primarily concerns educational authorities and teachers. But skilled educing and training of the physical and mental powers cannot be secured without medical inspection and supervision. The Minister of Health is made responsible for the control of this "health" aspect of education.

The signatories of *The Times* letter, however, raise the larger question of the adequate provision of the means for the recreation of the people as a whole. I suggest that the term physical recreation should be employed as a general term for all the measures employed or that may be devised for physical exercise of a recreative nature.

The voluntary organization, having for its objects the reviving, originating, developing, and organizing of all forms of recreation, is already in process of formation—as far, at least, as concerns the periphery. Thus many large employers of labour have formed recreational associations for their employees. These are run on an entirely voluntary basis. One big firm has secured Colonel Wright, late head of the army gymnastic staff, as director of recreation. Again, Montgomeryshire has formed a county association, with Captain Glynn Jones, M.C., a triple blue, as secretary and organizer. A few of us in this area are busy in propaganda with a view to the formation of a similar association for the city of Aberdeen. One ventures to hope that a central council will be formed forthwith, and that it will be able to send out eminent authorities to various parts of the periphery to assist with advice and in propaganda work.

The movement is certain to spread, and it is to be hoped that medical men everywhere will take their natural place as leaders and expert guides.

One further hopes that the Ministry of Health will institute research into problems of the scientific control and adaptation of the rhythm of rest and exercise in the treatment of disablement resulting from disease and injury.

There is surely little need at this date to warn against undue emphasis being put on the value of gymnastic systems of physical culture. The war has demonstrated that the British system by games, sport, and drill is greatly superior to any mechanical system of "movements."—I am, etc.,

C. FORBES, O.B.E., M.B.,
Late Captain R.A.M.C.(T.F.).

Aberdeen, Dec. 1st.

ENGLISH DOCTORS FOR SPAIN.

SIR,—I am at a loss to understand the meaning of an advertisement in the BRITISH MEDICAL JOURNAL of last week, addressed to "Doctors and dentists desirous of arranging a practice in a perfect climate"—that is, Spain. As an English doctor who practised in Spain before the war, and who lately spent some months there, I have no hesitation in warning any English doctor against thinking there is any opening in that country for foreign doctors.

In the first place no foreigner can practise without a special licence, which I believe cannot now be obtained. Such a licence would be strongly opposed owing to there being no reciprocity with this country. When I was granted a licence some years ago I was given to understand that it was the last to be given. There are no large communities of British in Spain, and those that exist are a decidedly healthy lot. The fees obtainable are small. There is no demand by the British residents for English doctors, and the Spaniards certainly do not want them. Native-born doctors swarm in Spain. There are over two thousand in Madrid alone. Spain is not a country where invalids go; they would hardly be welcome, and certainly there is no accommodation for them.

Just now there is a rush of our countrymen with handbags all over Spain making inquiries about business opportunities, because during the war many commercial men have made fortunes there as in other neutral countries. These flying Britishers do not mean "practices" for British doctors. Their main medical requirements can be obtained at any chemist's in the form of handfuls of sodium bicarbonate to correct the acid wines of the execrable hotels of the country. Spain is not a country for British doctors, and I hope none will allow themselves to seek it as a field for medical practice. Of the dental side of the question I know nothing.—I am, etc.,

Sevenoaks, Dec. 8th. FREDERIC VICARS, M.D.Brux.

GENERAL MEDICAL COUNCIL ELECTION—IRELAND.

SIR,—Will you allow me to thank the 616 Irish doctors who voted for me at the recent election, as well as the many others whose offers of support came too late?—I am, etc.,

Dublin, Dec. 4th. J. C. McWALTER.

A BILL providing for the establishment of the first board of health in New Mexico was passed during the last session of the State Legislature.

[1] BRITISH MEDICAL JOURNAL, November 8th, p. 607.

The Services.

ROYAL ARMY MEDICAL CORPS.

Revised Rates of Specialist and Charge Pay.

THE conditions for the issue of additional pay and charge pay to R.A.M.C. officers have now been revised by Royal Warrant.

Additional pay up to 5s. a day is now issuable to officers not above the rank of Lieutenant-Colonel while acting as specialists in posts considered by the Army Council to merit additional pay. Officers granted temporary higher rank while holding appointments under the Directorates of Hygiene and Pathology will not be eligible for additional pay as specialists while holding such temporary rank.

The following is the new scale of hospital charge pay: For the officer in charge of a hospital, if the number of equipped beds as certified by the D.D.M.S. exceeds 50, 2s. 6d. per diem; 150 beds, 5s.; 300 beds, 7s. 6d.; 500 beds, 10s. The officer in charge of the medical or surgical division of a general hospital with not less than 300 beds will receive half the above rates.

HONOURS.

Foreign Decorations..

THE following decorations have been conferred upon medical officers by the King of the Hellenes, in recognition of distinguished services rendered during the course of the campaign.

Medal for Military Merit.—3rd Class: Lieut.-Colonel and Brevet Colonel (temporary Colonel) William H. S. Nickerson, V.C., C.M.G., R.A.M.C., Lieut.-Colonel Montagu Marmion Lowsley, D.S.O., R.A.M.C., Major (acting Lieut.-Colonel) Osburne Ievers, D.S.O., R.A.M.C.; Captains James Rowland Hill, R.A.M.C., John Patrick, R.A.M.C.(T.F.), temporary Captain (acting Major) William Halliday Welsh, R.A.M.C. *4th Class:* Temporary Captain James C. M. Bailey, O.B.E., R.A.M.C.

Universities and Colleges.

UNIVERSITY OF CAMBRIDGE.

AT a congregation held on December 6th the following recommendation by the Council of the Senate on memorials concerning the relation of women students to the University was approved without opposition:

> That a syndicate be appointed to consider whether women students should be admitted to membership of the University, and, if so, with what limitations, if any; and, alternatively, to consider, if women students are not admitted to membership, by what means the University could co-operate with the women's colleges or other bodies in the conferment of degrees on women students; and that the syndicate report on both these terms of reference before the end of the Easter term, 1920.

The syndicate will consist of the Vice-Chancellor and twelve others.

Approval was given for the proposed institute for parasitological research to be known as the Molteno Institute for Research in Parasitology.

The following medical degrees were conferred:

M.D.—*H. J. S. Morton.
M.B., B.CH.—H. H. Matthias, S. L Higgs, F. T. Burkitt, N. Rumboll.
M.B.—L R. Shore, D. V. Pickering.
B.CH.—T. A. Jones, J. E. Sharp.

*Admitted by proxy.

UNIVERSITY OF LONDON.

A MEETING of the Senate was held on November 19th.

Sir Cooper Perry was appointed as from February 1st, 1920, Principal Officer. The post has been in abeyance since the resignation of Sir Henry Miers in 1915.

Intimation was received of a bequest of approximately £3,000 under the will of the late Mr. T. S. Hughes for the encouragement by scholarships or otherwise of original medical research at the University.

A resolution was adopted expressing appreciation of the generosity of the Worshipful Company of Goldsmiths in presenting to the London Hospital Medical College £15,000 National War Bonds for the endowment of a University chair of bacteriology bearing the name of the Company and tenable at that College.

The following teachers were recognized as teachers of the University in the subjects mentioned at the institutions indicated:—

Guy's Hospital Medical School: Dr. F. E. Shipway (anaesthetics).
University College Hospital Medical School: Dr. H. J. Shirley (anaesthetics).
St. Mary's Hospital Medical School: Dr. E. H. Kettle (pathology).
Hospital for Sick Children: Dr. R. S. Frew (diseases of children); Dr. D. N. Nabarro (bacteriology).
National Hospital for the Paralysed and Epileptic: Mr. P. W. Saunders (neurology).
Royal London Ophthalmic Hospital: Mr. F. A. Juler.

It was reported that in view of the numbers of entries for the M.B., B.S. in October, 1919, the Vice-Chancellor had appointed Dr. James Calvert and Dr. S. P. Phillips additional examiners in medicine, and Sir A. Pearce Gould, Mr. W. F. Haslam, and Mr. W. Turner as additional examiners in surgery.

Professor R. T. Leiper and Professor Warrington Yorke, or failing him, Dr. John Rennie (ext.), have been appointed examiners in helminthology for the M.Sc. and M.Sc.Econ. examinations for internal students to be held in December, 1919. Dr. P. Manson-Bahr, D.S.O., has been appointed examiner in tropical medicine during the temporary absence of Dr. Daniels.

External students who have been debarred from presenting themselves for examination for medical degrees by service under the War Office, or Admiralty, or by hospital service in connexion with the war, or by other approved service in connexion with national defence will be, until further notice, and provided they comply with the regulations in all other respects:

1. Permitted to enter at the First Examination for Medical Degrees in either (*a*) Inorganic Chemistry and Physics, or (*b*) General Biology, subject to the approval of the External Council.
2. Credited with any subject in which they pass at the First Examination for Medical Degrees or Second Examination for Medical Degrees, Part II.
3. Permitted, if they fail in Forensic Medicine only in Group I of the Third Examination for Medical Degrees, to present themselves for re-examination in that subject only in order to complete the examination in Group I.

Sir Seymour Sharkey and Sir David Ferrier, F.R.S., have been elected chairmen of the Graham Legacy Committee and Physiological Laboratory Committee respectively.

Applications for the University chair of physiology tenable at the London Hospital, salary £800 a year, must be received by the Academic Registrar not later than the first post on December 31st. Envelopes should be marked "Chair of Physiology."

UNIVERSITY OF MANCHESTER.

DR. E. M. BROCKBANK, Lecturer on Clinical Medicine in the University, has been elected a member of the Court of Governors.

Dr. C. H. Tattersall, M.O.H. for Salford, has resigned his lectureship in public health administration owing to the increased duties of his position as medical officer of health.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

AT a meeting of the College held on December 5th, Mr. John B. Story, President, in the chair, Major-General R. H. Sawyer, C.B., C.M.G., A.M.S., F.R.C.S.I., was unanimously elected a member of the Council in the place of the late Mr. Richard Dancer Purefoy.

Obituary.

JOHN BURDON, L.R.C.P., L.R.C.S.ED.,

Newcastle-upon-Tyne.

ON November 30th, after an illness of three days, during which he was attended by his friend Dr. James J. Campbell, Dr. Burdon passed quietly away in sleep at the age of 75. During the last two or three years he had been in declining health, owing to recurrent attacks of cardiac failure. Not well known to the present generation on account of his retiring disposition, he yet played an unostentatious but interesting part in social and religious life four decades ago. Licensed for the Wesleyan ministry, he left that body, owing to his breadth of views upon the doctrine of "eternal punishment." Finding refuge in at least one other section of Nonconformity, he remained in the ministry until he felt the call to what he regarded as more practical Christian work—first in the slums of East London, where he co-operated with the late Canon Barnett, and latterly in the practice of medicine.

He was of good old Durham stock, and having spent his boyhood in Cleadon near Sunderland, he was educated at the old College of Medicine and the old Newcastle Infirmary, where he was house-physician to Sir Thomas Oliver, with whom he remained on terms of the most intimate friendship until the last hours of his life. In whatever company as a student circumstances found him his influence was always for good. He qualified in 1862, and for a few years he practised in Willington Quay; ultimately, as he had a large acquaintance in Newcastle, he removed to that city, where he became a busy and successful medical practitioner; almost every patient became at the same time a friend, for by his quiet, paternal, and sympathetic manner he endeared himself to all. For a period he was assistant physician to the Hospital for Diseases of Children, and surgeon to the Hospital for Diseases of the Throat and Ear. Thirty years ago he was the means of instituting a seaside camp for the poor boys of Tyneside, and by his instrumentality several lads each summer were sent to the huts on the sandy dunes at New Hartley, immediately south of Blyth. Dr. Burdon was, therefore, one of the pioneers of the seaside camps for boys. The good the change to the seaside did to the health and physique of the lads was remarkable,

as the writer can testify, for he acted as medical examiner of the boys before they went into the camp and on their return from it.

The attractiveness of John Burdon lay in his quiet and sympathetic demeanour, absence of malice, and in his thoughtful attitude towards the many-sided problems of life. He was at his best when alone with a friend to whom he could unburden himself of his pent-up thought. His command of language and his catholicity made him a pleasing conversationalist and a brilliant essayist. He wrote several poems, some of them of considerable merit. He was laid to rest in St. Andrew's Cemetery on December 2nd, amid the regrets of many friends. He has left one son; his wife died a few years ago.

WE regret to record the death, on November 6th, at the age of 74, of Dr. ALEXANDER GEORGE DUNCAN of Church End, Finchley. A native of New Pitsligo, Aberdeenshire, he spent the first few years of his professional life near his home, but settled at Stamford Hill in 1881. Here his sterling character and quiet painstaking, laborious, conscientious, and kindly attention to his patients soon gained for him an extensive middle-class practice. He was indeed an excellent family doctor, thoroughly interested in his individual cases, competent and always ready to investigate them, of sound judgement in prognosis, shrewd, experienced, and skilful in routine treatment. A few years ago he retired to Finchley to spend the end of his life near his son, Dr. Norman Duncan, and retain a parting interest in work. He was a man of high personal character, greatly respected by his neighbouring colleagues as a loyal, interesting, and valued friend, always ready to entertain them with fresh Scottish stories, which he told particularly well. He was three times married, his third wife surviving him.

DR. R. RAILSTON RICHARDSON, whose death took place in a nursing home in Edinburgh on November 19th, had been in poor health for some time. He graduated M.B., C.M.Edin. in 1897, after having in the same year obtained the Scottish triple qualification. For many years he acted as senior demonstrator in anatomy at Surgeons' Hall, and was most popular with the undergraduates frequenting the extramural school there. He also had a large practice in Edinburgh, in whose streets his tall slim figure was well known. He was honorary physician to the Princess Louise Argyll and Sutherland Highlanders' Association.

WE have to record with regret the death, on November 30th, of Dr. RICHARD HILL NORRIS of Aston, Birmingham. He was a son of the late Dr. Richard Norris, F.R.S.E., and took the diplomas of L.S.A. in 1875 and of L.R.C.S.Edin. in 1876, and the degree of M.D.Brussels in 1877. He was for a time assistant demonstrator of physiology in Queen's College, Birmingham, and afterwards settled in practice at Aston. He was appointed a magistrate for the county of Warwick in April, 1894, and was for some years a member of the Warwickshire County Council. He was 66 years of age and leaves a widow and a son and daughter.

Medical News.

LORD WALSINGHAM, who died of pneumonia on December 3rd at the age of 76, was a trustee of the Hunterian Collection of the Royal College of Surgeons of England. He was a Fellow of the Royal Society and had been President of the Entomological Society. He was an authority on the micro-lepidoptera, and the collection of them which he presented to the Natural History Museum is the largest in the world.

IN a recent Chadwick public lecture, Dr. Cates, M.O.H. and school M.O. St. Helens, said that venereal disease was spreading among the civil population, with a consequent increase of ophthalmia in the newborn. In one district with a population of 100,000 persons there had been 70 per cent. more ophthalmia this year than in 1918.

GUY'S HOSPITAL has received from an anonymous benefactor a gift of £20,000.

THE fifth number of the *Bulletin of the League of Red Cross Societies* gives a narrative account by Captain J. T. Marshall of the visit of the medical commission of the League to Poland to investigate typhus and other epidemic diseases. This supplements the report of the commission, of which we gave an account in the JOURNAL of November 1st, p. 565. It is announced that the Swiss and Polish Red Cross Societies have been admitted into membership of the League, and that Lieut.-General Sir David Henderson, the Director-General, is visiting America on business connected with the League.

SURGEON REAR ADMIRAL SIR ROBERT HILL, K.C.M.G., Medical Director-General R.N., has been appointed a Knight of Grace in the Order of St. John of Jerusalem.

THE house and library of the Royal Society of Medicine will be closed from Monday, December 22nd, to Saturday, December 27th, both days inclusive.

Letters, Notes, and Answers.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C.2, on receipt of proof.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL.

THE postal address of the BRITISH MEDICAL ASSOCIATION and BRITISH MEDICAL JOURNAL is 429, Strand, London, W.C.2. The telegraphic addresses are:

1. EDITOR of the BRITISH MEDICAL JOURNAL, *Aitiology, Westrand, London*; telephone, 2631, Gerrard.
2. FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate, Westrand, London*; telephone, 2630, Gerrard.
3. MEDICAL SECRETARY, *Medisecra, Westrand, London*; telephone, 2634, Gerrard. The address of the Irish Office of the British Medical Association is 16, South Frederick Street, Dublin.

QUERIES AND ANSWERS.

W. H. H.—The book on foods and their values most suitable for our correspondent's purpose is *The Elements of the Science of Nutrition*, third edition, by Graham Lusk, Ph.D., Sc.D., F.R.S. (Philadelphia and London: W. B. Saunders Co., 1917. 21s. net).

INCOME TAX.

T. H. C. inquires whether there is any stipulation as to length of service with regard to the "service rate," and, if so, what is its nature?

*** There is a stipulation introduced by the Finance Act of 1916, Section 31, to the effect that the special rate is to apply only where the person charged has within the financial year in question served (*a*) out of the British islands or (*b*) for at least one month continuously in the British islands. Consequently our correspondent would not appear to be entitled to the special rate for 1919-20 if his military service terminated before May 5th, 1919.

R. B. F., a civilian medical practitioner holding a full-time appointment on a medical board, asks if his salary is to be taxed at ordinary civilian rates, or whether he can claim to be assessed at the special military rates.

*** We are in the difficulty that, so far, the case of Curtis *v.* Holdsworth, dealing with the claim to service rates of army paymasters, has not been fully reported. The Board of Inland Revenue admits that the principle of that decision applies to temporary civilian doctors (including women doctors) employed at military hospitals, at any rate on terms implying full-time employment. We can see no distinction between those cases and employment under similar conditions on a medical board, but hesitate to express a definite opinion to that effect before seeing the full report in the Curtis *v.* Holdsworth case.

ORGANIC EXTRACTS IN DYSMENORRHOEA.

J. T. asks for information regarding the value of treatment for dysmenorrhoea by extracts of endocrine gland.

*** True dysmenorrhoea—that is, menstrual in time, and caused essentially by uterine colic—is due either to underdevelopment of the uterine muscle, or to clotting of the menstrual blood. The former condition may be successfully treated by thyroid extract, provided the treatment is instituted early enough. Ovarian extract may also help to stimulate the proper development of the uterus. When the colic is due to clots, pituitary extract may help by expelling the blood before it has time to clot. Suprarenal extract has also been used to counteract the excess of ovarian secretion to which the congestive condition of the endometrium in some such cases is due. References to the subject will be found in

The Principles of Gynaecology, by W. Blair Bell, B.S., M.D. London: Baillière, Tindall, and Cox. 1919. 38s. net); *Gynecology*, by William P. Graves, A.B., M.D., F.A.C.S. (Philadelphia and London: W. B. Saunders Co. 1918. 7.75 dols. net); and in the *New System of Gynaecology*, edited by Thomas Watts Eden, M.D., and Cuthbert Lockyer, M.D. (London: Macmillan and Co., Limited. 1917. £6 6s. three volumes).

MARRIAGE OF COUSINS.

"ARIES."—The following paragraph from the third edition of *Heredity*, by Professor J. Arthur Thomson, well states, we believe, the most recent opinion as to the marriage of cousins:

"In regard to cousin marriages in mankind, the family history should be carefully scrutinized. The likelihood of unhealthy offspring will be very great if there are the same hereditary taints in the lineage of both parents. If there is a well-defined family predisposition to certain diseases, the fact that the cousins are somatically healthy does not warrant their becoming parents. If two somatically healthy cousins belonging to a tainted family have what is called a single or simplex dose of the taint, the probability is that on the average one-quarter of the children would be unhealthy. On the other hand, if the family history is good on both sides, there is no biological reason why two healthy cousins, who fall in love with one another, should not marry and have children."

"GASSING" AND LIFE ASSURANCE.

DR. E. B. HAZLETON (Sheffield) asks for the experience of others as to the sequelae in the case of a soldier who has been "gassed," particularly as to his liability to bronchitis, or winter bronchitis, and pulmonary tuberculosis. How many years should elapse before he can be considered a first-class life from a life assurance standpoint?

LETTERS, NOTES, ETC.

MINISTRY OF PENSIONS MEDICAL SERVICE.

APPLICATIONS are invited for the appointment of a certain number of trained neurologists, especially those experienced in modern psychotherapy, to hospitals under the Ministry of Pensions. These appointments are resident, and terminable at one month's notice on either side. The salaries for the senior posts are from £600 to £700 a year, with lodging, fuel, and light. Application forms can be obtained from the Director-General of Medical Services (M.S.1/B), Ministry of Pensions, 14, Great Smith Street, Westminster, S.W.1.

THE CARLISLE EXPERIMENT.

J. S." writes to suggest that the results of the Carlisle experiment in liquor control should be submitted to a commission consisting of a lawyer, a statistician, and a member of the medical profession. The inquiry should, he thinks, include a comparison of the results in Carlisle, not with the rest of England, but with an area as nearly as possible resembling the Carlisle area in all respects.

THE MANDRAKE.

X" writes: I was much impressed by the Russian prescription for preserving a youthful appearance quoted by your correspondent last week. Our local chemist could not dispense mandragora, but I took the three glasses of port without it; whereafter I was "exactly the shape of a man sitting," and I am able to state that, although my age is 30, I looked (and felt) like 70 next morning.

A DUTCH MEDICAL CALENDAR.

MEDICAL art calendar has been published for several years at the Hague for the Netherlands Medical Association. We have received the issue for 1920. It is a sumptuous wall calendar and is illustrated by twenty-eight reproductions of photographs of pictures, drawings, and prints by Dutch masters; the title "medical" is justified by the subjects of the pictures selected. Special praise may be given to the portrait of Boerhaave, by Gelder, at the Hague, and to a really brilliant print of the portrait group at Amsterdam representing Fontanus (Johann Fonteyn) giving a demonstration on a skull (1625). A curious drawing after Peter Bruegel (1569) is reproduced, showing a dancing ceremony at Molenbeeck on St. John's Day, in which may be seen several portly matrons capering vigorously, encouraged by two bagpipes and restrained by male friends, who appear much perturbed. The other reproductions include pictures, some well known, as, for instance, Rembrandt's lesson in anatomy at the Hague, and others less familiar; among the latter is an eighteenth century picture showing a bedroom, a newborn babe, its parents, nurse, and grandmother, and a nineteenth century painting of the store-room and laboratory of a country apothecary. Both show that the Dutch tradition of brightly lighted interiors was still strong at those dates. Altogether Dr. A. Sikkel, described as the father of the calendar, and the Netherlands Medical Association may be congratulated on the way in which their suggestion has been carried out by the publisher, Mr. J. Philip Kruseman (384, Frankenslag, the Hague). He may be advised to stick to Dutch photographers, who are evidently more skilful than German. Any one wanting a Christmas present a little out of the common might do well to get a copy of this *Geneeskundigen Kunstkalender*. It is supplied for 6s., post free.

AFRICAN EXPLORERS' INSTRUMENTS.

MESSRS. W. B. HILLIARD AND SONS, of Glasgow, write: The description of the historic Livingstone case of instruments on page 754 of your last issue is correct, but the name should be W. *Oswell* Livingstone, not "Oswald," as he was named after the great traveller's friend and patron, Mr. W. Oswell. We supplied many surgical instruments to Livingstone and the medical missionary stations in which he was interested. Mr. J. B. Hilliard was W. Oswell Livingstone's class-fellow and intimate friend in Glasgow University, groomsman at his wedding, godfather to his only child, and is now trustee for his widow. We have the great traveller's well-thumbed pocket bible, various instruments, and other mementos, which have aroused interest in many missionary exhibitions throughout Britain to which they were lent. Mr. Hilliard has visited the Zambesi, the town of Livingstone, and many scenes of the traveller's labours, and has had frequent intimate talks with J. Young of Kelly, Gordon Bennett, and H. M. Stanley in Egypt and at home in connexion with Livingstone and African travel.

DR. J. J. HANLEY (Motherwell) writes: It may be of interest to your readers to know that the barometer (Negretti and Zambra, London) used by Stanley is to be seen at Blackrock College, Dublin. The famous explorer stayed, I believe, for a short time at one of the mission stations of the Holy Ghost Fathers, and gave the mission the barometer above referred to. I had the pleasure of seeing it and the makers' name on it. It seemed to be in good condition though age-worn.

A CASE OF QUADRUPLETS.

DR. J. LIVINGSTONE LOUDON, M.O.H. for Hamilton, has been good enough to send us the following particulars relating to the recent birth of quadruplets in that town, obtained from Dr. John Thomson, who was called in after the event, and from Miss A. Melville, the burgh health visitor:

The father, a Scotsman, 27 years of age, is a miner by occupation. The mother is Irish and 28 years of age. They have been married for four years and live in a single apartment. There are two previous children, aged 3 years and 1 year and 10 months respectively. There is no history of multiple pregnancies on either side of the family. The quadruplets consist of three boys and a girl; the weights at birth were 5 lb., 5 lb., 5½ lb., and 5 lb. respectively. They were born at 1.10 a.m., 1.40 a.m., 3.40 a.m., and 3.50 a.m. The confinement was at "full term." There were two placentae, one with three cords and one with a single cord. The mother and children are all doing well.

The following vital statistics for the month of October in Hamilton, the town where these children were born, may be of interest, although they have no direct bearing on this remarkable birth: Hamilton is a town of 39,900 inhabitants; the principal industry is coal mining. During October, 1919, the birth rate was 39.6, being the highest in the sixteen principal towns (that is, with a population over 30,000) in Scotland. Perth was lowest with 21.4. For the same period the death rate was 7.7, the lowest in the sixteen principal towns, Edinburgh being highest with 15. The infantile death rate was 43 per 1,000 births, being the second lowest in the sixteen principal towns. Ayr was lowest with 36, and Dundee highest with 140.

Our informant adds that G. Veit, from the records of 13,000,000 births in Prussia, states that twins are born once in every 89 births, triplets once in every 7,910, and quadruplets once in every 371,125 births.

THE price of the second edition of Dr. Cecil Webb-Johnson's book on *Painless Childbirth and Twilight Sleep*, noted in our issue of November 29th, p. 714, is 10s. 6d., and not four rupees as stated.

VACANCIES.

NOTIFICATIONS of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 68, 71, 72, 73, 74, and 75 of our advertisement columns, and advertisements as to partnerships, assistantships, and locum tenencies at pages 69 and 70.

THE following vacant appointments for certifying factory surgeons are announced: Derby (Derby), Gosport (Hants), Limerick (Limerick), Lostwithiel (Cornwall), Rotherham (Yorks, West Riding), Southend (Essex).

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

	£	s.	d.
Seven lines and under	0	6	0
Each additional line	0	0	9
Whole single column	4	0	0
Whole page	12	0	0

An average line contains six words.

All remittances by Post Office Orders must be made payable to the British Medical Association at the General Post Office, London. No responsibility will be accepted for any such remittance not so safeguarded.

Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Wednesday morning preceding publication, and, if not paid for at the time, should be accompanied by a reference.

NOTE.—It is against the rules of the Post Office to receive *poste restante* letters addressed either in initials or numbers.

An Address

ON

THE EVOLUTION OF THE SURGEON AND ON HIS TRAINING.*

DELIVERED TO THE LIVERPOOL MEDICAL INSTITUTION

BY

W. THELWALL THOMAS, CH.M.LIVERP., F.R.C.S.,

PRESIDENT OF THE INSTITUTION,

PROFESSOR OF REGIONAL SURGERY (IN CHARGE OF THE DEPARTMENT OF SURGERY), UNIVERSITY OF LIVERPOOL; SURGEON TO THE ROYAL INFIRMARY, LIVERPOOL.

LAST year it was my pleasure to bring before you some observations on "The evolution of the voluntary hospital and its future." To day I hope it may be of interest to spend some minutes in considering the evolution of the surgeon and his training.

Surgical practice, or the craft of surgery, is as old as the human race. There are evidences in the Neolithic period of the highly developed and important operation of trephining, in skulls from which large pieces of bone had been removed by flint instruments; that recovery took place in many cases is evidenced by the rounding off of the edges of bone by the healing process. We have a right to assume that surgical procedures of a lesser degree and the treatment of broken bones must have been of ordinary occurrence.

Coming to nearer times, with which archaeological research has made us familiar, we find during the period of Egyptian civilization, which probably dates back 8,000 years, abundant proof of a knowledge of anatomy and a skill in the surgical treatment of fractures by bandaging and splints equalling, if not excelling, as regards bandaging, any reverse or spica seen in the present day. There is not a single form of modern bandaging which was not practised in the wrappings of an Egyptian mummy, and the specimens of well united fractured bones and some unearthed examples of fractures, with their surrounding splints in position, demonstrate methods in use at the present time.

On the walls of the temples may be seen bas-reliefs representing limbs which had been removed by amputation, with instruments portrayed similar to those employed in our time, and it is clear that the art or craft of surgery was well developed in the land and in the time of the Pharaohs. The description of the first operation performed in Mesopotamia, outlined in the second chapter of Genesis, must have been written by someone thoroughly conversant with surgical art, for it draws attention to a degree of anaesthesia necessary for the successful performance of the operation of subperiosteal excision of a rib, without the knowledge of the patient, and we note that the wound healed by immediate union, a lightning variety of what we now aim at and call "first intention." The specimen removed—in its transformed state—is with us to-day, adorning every land.

Racing down the centuries we arrive at the period of Greek civilization, where before the time of Hippocrates (born 460 B.C.) surgical practice was inextricably mixed up with magic, mythology and priestcraft, for it was considered profanation to dissect or mutilate the human corpse. Hippocrates delivered medicine and surgery from the thraldom of superstition and philosophy. He was in all probability the first public teacher of the healing art, the first to disclose the secrets of his art to the world, which hitherto had only been whispered in secret, sacrosanct assemblies. He possessed a wonderful working knowledge of human anatomy, which could only have been acquired by dissection, probably in secret, for it was not until a century after his time that dissections became abundant and open in the Alexandrian School.

Many of the operations described in his works would embellish a modern textbook. To quote from Dr. Adams's *Life of Hippocrates*:

"In Surgery he was a bold operator; he fearlessly, and, as we would now think, in some cases unnecessarily, perforated the skull with the trepan and the trephine in injuries of the head. He opened the chest in empyema and hydrothorax. His extensive practice, and no doubt his great familiarity with the accidents occurring at the public games of his country, must have furnished him with ample opportunities of becoming acquainted with dislocations and fractures of all kinds, and how well he profited by the opportunities he thus enjoyed every page of his treatises 'On Fractures' and 'On the Articulations' abundantly testify. . . . In his views with regard to the nature of club-foot, it might have been affirmed of him a few years ago that he was twenty-four centuries in advance of his profession when he stated that in this case there is no dislocation but merely a declination of the foot; and that in infancy, by means of methodical bandaging, a cure may in most cases be effected without surgical operation."

Orthopaedic surgery is much older than some have imagined.

Until the eleventh century of our era the works of Hippocrates and of the Romans, Celsus and Galen (who were little better than copyists) were the main sources of all information in medicine and surgery.

In the fifth century commenced the great blank of the dark ages, during which European civilization was overcome by the barbarians from the North and East, and all progress was arrested in the welter, and so remained for over five hundred years. At the end of this time—eleventh century—surgery has been described as in a lower status than it was among the Greeks in the Trojan war. Monasteries became the depositories of manuscripts—in fact, the libraries; the practitioners of medicine and surgery were the monks and vagrant quacks, or locally-styled wise men, who did what they could, and extracted whatever they were able in the way of remuneration for their services. The monks scandalously neglected their religious duties in the more lucrative and versatile calling of perambulating practitioners of medicine and surgery, until it was decreed that no ecclesiastic should be absent for more than two months from his monastery during a year. At this time (1092) monks were forbidden to wear beards, and shaved faces at once became the fashion among the laity; the calling of barbers immediately rose to be remunerative and busy.

The neglect of religious duties by the monks led to many Papal Bulls limiting their outside activities, and the practice by them of surgery was finally placed outside their province by the Council of Tours, 1163, where it was decreed that the Church "abhors the shedding of blood," which was denounced as unfit for the hands of priests and men of learning. Surgery became taboo, and nothing more than a servant to medicine in every sense of the term.

The physician had the sole privilege of prescribing internal medicines and also of judging and directing when surgical procedures were necessary. The inferior being, the surgeon, was only called upon to use his knife when ordered to do so by the exalted physician, and then promptly took leave of the case. Although there had been a development of surgery apart from medicine at the Alexandrian School, it became swamped in the dark ages, but in spite of the derogatory position of the surgeon, there were in these ages a few who held up the torch (or scalpel), but at any one period in the then known world they could be counted on the fingers of one hand.

In the Anglo-Saxon Leech Book compiled about 1100 we first find illustrations of surgical operations, but they do not denote any advance on proceedings described by Hippocrates. The revival of letters and the foundation of universities at this period (Paris 1110, Oxford 1167, Cambridge 1209, to mention a few) improved matters as regards general learning, but the first real attempt to improve the teaching of medicine took place at Salerno (Italy), where the enlightened Roger II of Sicily founded a school of medicine in 1137—to become a university in 1252—but a few years later the general university functions were transferred to Naples, leaving Salerno its medical school, which formulated a definite curriculum and degree. The details read as if the General Medical Council of our time had been consulted in its framing. I give some paragraphs:

No one shall be permitted to study medicine until he has given his attention to Logic for 3 years.

In the study of medicine he must spend 5 years, during which period he must also acquire a knowledge of Surgery, for this forms a part of Medicine. After this, but not before, permission may be given to practise, provided that he passes the examination prescribed by the authorities, and at the same time produces a certificate that he has studied for the period required by law.

The teachers must during the period of five years expound in their lectures the genuine writings of Hippocrates and

*The address was illustrated by lantern slides of early surgical operations and instruments.

Galen in, the theory and practice of Medicine, but even when the prescribed five years of medical study are passed, the doctor shall not forthwith practise on his own account, but for a full year more he should habitually consult an older, experienced practitioner in the exercise of his profession.

No surgeon shall be allowed to practise until he has submitted certificates in writing of the teachers of the faculty of Medicine that he has spent at least one year in the study of that part of Medical Science which gives skill in the practice of Surgery, that in the colleges he has diligently and especially studied the anatomy of the human body, and is thoroughly experienced in the way in which operations are successfully performed, and healing is brought about afterwards.

It is a curriculum that must excite our admiration and in some respects might be copied to-day; it was a great step forward, and bears the imprint of much thought and appreciation of the learning required for the noble profession, and, as will be noticed, lays special stress on the manual part or craft of surgery. The foundation of the School of Salerno was on so lavish a scale that at a much later period it was averred that there were as many professors as students.

A century later we have an interesting work in manuscript by Guy de Chauliac (born 1300) with illustrations (better executed and more artistic than in the Anglo-Saxon Leech Book), giving a much better impression of the performance of several operations. This became the classical work for succeeding centuries.

Confining our attention to England, we find that the barbers had developed minor surgery, forming themselves into a Guild of Barber-Surgeons, and becoming in 1462 a City Company—with a Royal Charter, and a system of apprenticeship; the liverymen were entitled to four apprentices and the freemen to three; they had ordinances controlling the training and admission by examination to their company—thus granting a licence to practise—with severe restrictions, under pains and penalties, for irregular practice on the part of quacks.

There was also an independent Guild of Surgeons; the members were probably few in number, and they were extremely jealous of the power of the Barbers, and managed to secure a charter thirty years later (1492), and, twenty years afterwards, were instrumental in bringing about the passage of an Act of Parliament (1511) providing that no one should practise medicine or surgery in London, or seven miles around, without being first examined, approved and admitted by four doctors or expert surgeons acting under the Bishop of London or the Dean of St. Paul's, and beyond that seven miles, approved by similar bodies under a bishop or vicar-general. Thus we find two corporations having much the same sort of power, but the confusion and competition were finally done away when, in 1540, they were merged by Act of Parliament into the United Barber-Surgeons' Company, perpetuated in art by the magnificent picture—considered the finest example of Holbein's work—still in the Barber-Surgeons' Hall. The artist, by artistic licence, has placed a charter and seal in the hand of Henry the Eighth instead of an Act of Parliament, usually represented by a scroll; an Act, of course, was never presented to any corporation!

It is interesting to find from time to time in the *Annals of the Barber-Surgeons* the names of examiners in surgery; attendance in lectures and demonstrations was compulsory, and absence had to be explained. The universities took hardly any interest in surgery, being devoted to the humanities and physic. For two centuries this arrangement continued. Much progress can be observed in important directions during this period throughout Europe, as illustrations in the works of Scultetus, Paré, and Heister show.

With the advent of the eighteenth century came the great development of voluntary hospitals, providing special opportunities for the practice of surgery. This century produced Cheselden (1688–1752), Pott (1713–1788), John Hunter (1728–1793), Abernethy (1764–1831), Astley Cooper (1768–1841) in London, and in the provinces Park and Alanson, in Liverpool, and others who distinguished themselves in many provincial towns. John Hunter by his researches was bringing into existence the science of modern surgery, and he has been styled the greatest man who ever adorned the profession previous to Lister.

The surgeons dissociated themselves from the barbers in 1745, becoming the Masters and Governors and Commonalty of the Art and Science of Surgery. In 1800 they obtained a charter for the Royal College of Surgeons of London—changed later (1843) to the Royal College of Surgeons of England—when it was enacted a penal offence for anyone to practise surgery in London or seven miles around without being examined and licensed by ten of them.

Progress was rapid in this century, being synchronous with, and largely the result of, the great increase in number of the voluntary hospitals, enabling the enthusiast quickly to put into practice the developments of the science of surgery, for hitherto the practice of surgery had been little more than a skilled handicraft. When we read the works published during this period and on into the middle of the nineteenth century, before the introduction of general anaesthesia, it is difficult to know which to admire the more—the courage, dexterity, and celerity of the operator, or the tough fibre and dogged stoicism of the patient. To try to picture the performance of amputations, excision of joints, or the ligation of arteries without general anaesthesia makes one shudder, and it is no wonder that great surgeons were few in number. The art of surgery had reached a very high level in the hands of real masters. All through the ages instruments were devised and many of them have not yet been improved upon, and I should advise anyone desirous of inventing some new instrument to consult old surgical works—lest he find his idea anticipated by centuries.

The combination of many qualities essential to a surgeon (in the days before chloroform) was met with in few individuals only, and although the pathology of wound infection and treatment were imperfectly understood, awaiting the development of the microscope and bacteriology, the results were in many instances marvellous. I mentioned last year a series of amputations by Alanson, with recovery in all in a few weeks without complications, and Hunter tied the femoral artery in a long series of cases with success in the cure of popliteal aneurysm.

A complete mastery of the craft was essential—a sureness, a boldness, and a fearlessness, with complete control of the instruments used, were especially necessary, for we can imagine the difficulties due to the movements of the patient and too often the disturbing effect of his moans and cries.

The introduction of general anaesthesia in 1846 threw wide the possibilities of surgical interference in all classes of patients, but, unfortunately, at the same time allowed all and sundry, many with little training, to try their prentice hands on the unfortunate sufferer. The need for quick, clean, bold strokes became less urgent, and I am of opinion that the craft deteriorated as a consequence; operations increased in frequency, and the death rate from shock, haemorrhage, and sepsis became very high, and many of us can recall the horror that existed in our student days in the minds of the public at the very thought of a surgical operation.

The great modern advance in the science of surgery dates from Lister. Antiseptic surgery was very tardily accepted after a tempestuous period of acrimonious discussions, comparable only to theological disputations, which were certainly entertaining to us students; and I well remember in the hospital where Lister carried out his pioneer work and demonstrated his control over sepsis and abolished hospital gangrene and pyaemia from his wards, that the surgical staff had some members in 1883 who could not (or would not) take advantage of the principles, but whose wards were quite readily diagnosed by their smell. The genesis and development of bacteriology has been so rapid that it is hard to realize that as students we were shown a few "germs" as a special treat through the only high-power lens then in Liverpool, and that at the outstanding feature of the British Medical Association Meeting in Liverpool in 1883 was the demonstration of micro-organisms under microscopes.

The great development of the science of surgery, based on advances in collateral subjects, has taken place within a generation, and it may astonish some members of my audience to learn that during my house-surgeoncy the abdominal cavity was not opened, except for the removal of a cystic ovary so large as to cry out for release.

The teaching of the sciences pertaining to surgery has taken up more and more time, and has overshadowed the training in the art, and this address is really intended as an appeal for more attention to the manual side or craft of surgery. Instruction given to students is too much

interfered with by examinations, and those have been so divided and subdivided that the aspirant seems to be continually reading for some portion or snippet of inquisition. In spite of the lengthening of the curriculum to five years some time ago, the period devoted to the manual or clinical side of general surgery (and medicine) is encroached upon by the demand for attention to all sorts of side shows.

The training in surgery needs serious modification, for under present requirements for the final examination too little evidence of familiarity with the art is asked for, and it is possible for a medical student to obtain a degree or diploma without having performed a single operation on the living person or having set a single fracture, yet the day following, he is competent by law to undertake any surgical investigation into any cavity that his courage and enterprise may prompt him to explore. If he aspires to an accepted special diploma in surgery, evidence is not demanded of any real training in the technical side of surgery. He need neither have held a house-surgeoncy nor have performed a single operation on the living. His acquaintance with operations need only have been obtained as a student in the class of operative surgery, and those of us who have conducted such a class know how unsatisfactory the material often is, and how limited and inefficient the training must be, except possibly in the grosser operations on the extremities—rare in real life. The principal proceedings on the abdominal viscera cannot be satisfactorily carried out, and layer suturing on the stomach and intestine in the cadaver is almost valueless.

Examination methods are no different from what they were thirty years ago, in spite of the enormous advance in surgical operations alone; the occasion of judging technique being operations on the cadaver, when vessels do not bleed and muscles do not retract.

Having received this super-qualification, the so-called surgeon, if lucky enough, may succeed in obtaining an appointment as an assistant surgeon to a hospital, and he now begins to practise the Art of Surgery and endeavours to become proficient, entirely on his own resources, without the guidance or criticism of any one. He does his best, and in time may become a skilled surgeon—but at what cost to the public? The phrase "that an oculist ruined a hatful of eyes before performing his first successful cataract operation," although an exaggeration, forcibly drew attention to our deficiency in technical education.

The time has arrived when reorganization in the teaching of practical surgery must take place if we wish to retain our position in the surgical world. It could be arranged that students in their final year should be appointed as assistant house-surgeons or clinical assistants in the out-patient or casualty departments, under a special surgical officer or assistant surgeon, and there taught to perform minor operations under careful supervision; for although as dressers they may have learnt details of aseptic surgery, it is only by practising them that they can acquire a thorough and practical knowledge, and they are as important in minor as in major operations. It should be a requirement of the universities and qualifying corporations to demand certified evidence of definite operations creditably performed, so that we may feel assured that the student when successful is not only able to pass the written and *viva voce* parts of examinations, but that he has been efficiently trained in the manual portion of his profession, that he is really fit to be let loose on the public as a skilled practitioner as well as a scientific one.

The suggestion is nothing more nor less than true apprenticeship.

The acquiring of good aseptic methods entails much time and trouble on the part of teachers and taught, and it may even become necessary to formulate a standard, in order to prevent deterioration, and minimize a tendency to degeneration into mere ritual.

The demands of modern surgery are great, and the public have a right to know that when a student becomes qualified as a surgeon he will prove a real help, and not a possible danger.

During the war we had, of necessity, to appoint senior students as casualty assistants and house-surgeons, and we were allowed the great advantage of diminishing the large number of lectures still demanded by examining bodies, a relic of the ages when textbooks were non-existent, and it was gratifying to notice how the men (and women) rejoiced in being trained in the practical side of their work. They were brought into intimate contact with diseases and accidents, and the keen interest awakened by this relation was pleasant to see. They acquired aptness in minor surgery and in the after-treatment of cases that showed itself in the improved results in the practical and clinical parts of their final examinations.

To carry out such a scheme additional teachers, prepared to devote sufficient time to ensure thoroughness, must be found. The work in a good surgical clinic of the present day is so great that I am sure it can, with advantage, be modified and improved at the same time by providing the requisite help to supervise and instruct students.

If the higher degrees in surgery required a candidate to present evidence of having been a house-surgeon, and later an assistant for a few years to an acknowledged surgeon, preferably in a teaching hospital, we should have at once the material at hand to inaugurate the change. Under the "chief" would be graded assistants occupying posts for a few years, responsible to him for allotted cases, their elucidation, treatment, and after-care; and promotion to the more serious work should be by merit. Full notes of a number of cases that had been under his care should be presented, as evidence of his proficiency in the art and science of surgery, before a candidate could appear for his final examination. The occupants of these posts would assist in teaching students, and should be remunerated to prevent the undue handicapping of anyone not endowed with a private income.

Looking into the future, it is clear to me that increased provision must be made for dealing with surgical work throughout the country, and we shall see the day when every county and small borough hospital must possess on its staff a fully trained surgeon (or surgeons) devoted to the practice of surgery in the institution and the surrounding neighbourhood. The work is already overwhelming, as the long waiting lists of patients for the large institutions testify. It is not ideal to expect practitioners of medicine, without special training in surgery, to be responsible for dealing with grave surgical emergencies, or major surgery generally; it is not just to their reputations, nor is it in the best interest of the community. Under such a scheme as is outlined above, there would in a few years be men available for such positions.

It is interesting to find that our American and Canadian friends have realized the weakness of the position, and in founding the American College of Surgeons have insisted on efficient training. I will quote only some of their regulations for the Fellowship, received a few days ago from the secretary. They are confirmatory of my thesis.

> He (the candidate) shall give evidence that he has served at least one year as intern in a creditable hospital and two years as a surgical assistant, or he shall give evidence of an apprenticeship of equivalent value. Five to eight years, after graduation in medicine, and devoted to special training and to practice, are normally the time requirement for eligibility to Fellowship, and the examination in the art and technique of surgery consists of, first, fifty complete case records to be submitted by the candidate of major work performed by himself: secondly, fifty cases in brief abstract of major work for which he was responsible, or in which he acted as assistant. . . .
>
> The professional activity of the candidate shall be limited to the study, diagnosis, and operative work in such specialty or specialties of surgery as the candidate may himself designate as follows: First, if the candidate resides in a city of less than fifty thousand inhabitants, at least 50 per cent. of his professional activity shall be limited to the study, diagnosis, and operative work in such specialty or specialties as stated. Secondly, in cities of over fifty thousand inhabitants, at least 80 per cent. of the professional activity of the candidate shall be so limited.

It will thus be noticed that after a careful training for three years evidence of a further period devoted to practice of surgery, and including fifty complete case records of major work performed by himself, are essential.

The American and Canadian public can rest assured that a Fellow of the American College of Surgeons is a trained and efficient surgeon.

The performance of a surgical operation requires, in addition to a knowledge of the science of surgery, minute attention to many details and a skilled use of instruments only obtainable by long training, and every surgeon should aim at producing, each time he operates, a perfect work of art, just as much as a true artist is always endeavouring to create a masterpiece by his brush and pigments, his chisel or his pen. He who approaches the ideal treats

tissues with gentleness, yet firmness, neither scratching like a domestic fowl on a dust-heap nor mangling anatomy like the carnivora.

I trust that these few remarks may help forward the plea, not for less science, but for a more thorough training in the art of surgery.

CHRONIC INTESTINAL STASIS IN CHILDREN.*

BY

GODFREY TAUNTON, M.R.C.S., L.R.C.P.,

SURGEON, ST. BARTHOLOMEW'S HOSPITAL, CHATHAM.

CHRONIC intestinal stasis is apt to be regarded as a condition affecting maturity because it is generally after this stage of life has been reached that patients present themselves for treatment, but only a few, if carefully questioned, fail to give a history which leads to the suspicion that their condition started in childhood or early infancy.

Chronic intestinal stasis in children produces ill effects in several ways. In the first place, from autointoxication—the introduction of poisons into the blood stream through the intestinal mucous membrane affecting harmfully all the tissues of the body. These toxins are produced normally during digestion by the micro-organisms naturally present in the lumen of the bowel, and often in addition by other micro-organisms which are able to establish themselves only in the presence of stasis. The mucous membrane of the intestine loses its function of absorbing only those products of digestion needed by the body and allows the absorption of these poisons, which in the natural state are prevented from passing through. In the second place, it produces ill effects by bringing about a condition that leads frequently to infection of the sterile gall bladder and pancreas, and of the appendix, which cannot be claimed to be sterile. In the third place, it produces ill effects in the bowel itself.

The portion of the intestine in which stasis occurs is dilated, and from the constant weight of its contents that part of its mesentery is lengthened, and a loop is formed which tends to gravitate towards the pelvis. Ulcerative processes, often tuberculous, are common, and by many cancer of the bowel is regarded as the end result of stasis.

So great is the misery produced in later life that if, as a result of its study in children, the condition can in some cases be prevented, in some cured, and in others improved, a great advance will be made, and we shall see fewer of those chronic invalids—dyspeptic, neurasthenic, incapable of performing useful work or enjoying active pleasures, with a distaste for food and an abhorrence of sexual intercourse. The earlier this condition is recognized the easier it is to effect a cure, and in some cases in which an operation is called for it is one of less severity than in later years; in far the greater number of cases at an early age an operation is not necessary—other treatment will prevent the progress of stasis and ultimately overcome it.

At no age than that at which the tissues are developing is it more important that they should be supplied with blood free from contamination with these toxins, which are probably absorbed where the stasis occurs in the bowel; the part where absorption is most evident is in the last foot or so of the small intestine. It is usually held that the function of the large intestine is the absorption of water from our digested food, and is purposely designed to promote a certain delay to allow time for this purpose. A great deal of support is given to this by those cases in women where the bowels only act once in every two or three weeks, and in cases of megacolon (Hirschsprung's disease), in neither of which are any symptoms of autointoxication similar to those of chronic intestinal stasis found. It is certainly often the case that controls in the large bowel may lead to back pressure in the small, either causing the ileo-caecal valve to be incompetent, or by producing a kink in this position by the drag of a caecum which has descended into the pelvis; in these cases the stasis in the ileum is secondary and not primary.

* A paper read at the annual meeting of the Kent Branch of the British Medical Association.

Chronic intestinal stasis may be classified as:

1. *Congenital.*

At some point in the bowel there is a shortness of mesentery relative to the rest, producing a kink most marked in the upright position, that portion of bowel being held up by this short mesentery at a higher level than the rest. This kink forms a control to the easy passage of intestinal contents. These congenital cases are most frequently caused by the mesentery of the appendix taking its origin higher up, and preventing the full descent of the caecum from its position under the liver in early life; they may also be due to the mesentery of the appendix arising from an attachment more towards the middle line and controlling the last few inches of the ileum.

2. *Acquired.*

The kink here producing the control is caused by the formation of bands or membranes. These acquired bands are often developed in conjunction with the congenital variety.

3. *Neuropathic.*

As this condition does not come within the scope of this paper a short reference to it only is necessary. It is marked by great lengthening of the mesentery and dropping of the bowel, the transverse colon often lying in the pelvis. The length of the transverse and the pelvic colon is increased. Its cause is probably some faulty development of the nerve supply, probably at the point where the splanchnic gives place to the systemic. These cases are those in which the large bowel is functionless, and often calls for colectomy.

In acquired chronic intestinal stasis and in many cases of congenital there are to be found certain bands or membranes connecting the parietal peritoneum which lines the abdominal wall with the visceral peritoneum covering the bowel and its mesentery. These have been described by Lane and attributed to the crystallization of lines of resistance to downward displacement, and at first they perform a useful function by the support they give to the bowel; but later, by the contraction to which all fibrous tissue is prone, they produce a harmful effect by kinking and obstructing the lumen of the bowel. These bands are to be found connecting the parietal to the visceral peritoneum in the following positions: On the outside surface of the caecum, ascending colon, hepatic and splenic flexures, and descending colon; on the under surface of duodeno-jejunal junction, terminal loop of ileum, transverse colon, and sigmoid, and binding together the proximal and distal arms of the hepatic and splenic flexures.

In appearance and consistency they vary; the band may be a thin, transparent, colourless membrane like the areolar tissue found in suet, and, when divided, leave the two surfaces of peritoneum unaltered in appearance and free from bleeding; or it may be a more opaque fibrous membrane with small capillary vessels ramifying in its substance, which on division shows the peritoneum to have lost some of its glistening polish with a few points oozing a small drop of blood; later the bands may contain vessels which require ligature on division.

The formation of these membranes and bands leads first to an obliteration of the original angle at the deflection of the peritoneum from the abdominal wall to the base of the mesentery, until gradually the whole surface of the mesentery and the posterior wall of bowel becomes attached to the posterior abdominal wall, and later this attachment creeps up the side of the bowel until that part which is opposite to its mesentery becomes fixed. At this stage a half-torsion of the bowel is produced. The kinking is thus due to the descent, when in the upright position, of the bowel, which at this point is held up by the shortening of its mesentery and the half-torsion just referred to.

In well advanced cases the extent to which the intestine can be drawn up to an incision through the anterior abdominal wall is dependent on the amount of mobility allowed by the subperitoneal fat to the parietal peritoneum of the posterior abdominal wall and the white line of peritoneal demarcation is seen close to or attached to the wall of the bowel. Careful division of the attaching membrane at this line of demarcation allows this fold of peritoneum, which seemingly is mesentery itself, to retract, and the true mesentery may be dissected out to its original length. The loop of the bowel, which could

only be brought up to the operation wound, may now be drawn several inches out of that wound.

In the under surface of the mesentery of the last few inches of the ileum, and in the same position at the sigmoid flexure, are often to be found in relation to those bands and membranes two conditions which I have not observed in other positions: (1) The controlling membrane near its centre has a flat mass of white fibrous tissue irregularly stellate in shape, with fibrous lines radiating from its many processes in the substance of the more transparent membrane; (2) often when dividing the controlling membrane distinct spaces lined with peritoneum are to be seen sometimes communicating with the general peritoneal cavity by a small opening like a diminutive lesser peritoneal sac, and in some cases a closed space and no communication can be demonstrated. These two conditions, unlike the bands elsewhere, do not lend themselves to the explanation that they are formed by the crystallization of lines of force to prevent descent. They are not to be found in every case —either or both may be present, and always in conjunction with bands as originally described.

The function of a serous membrane is to allow movement between two surfaces and to reduce friction to a minimum. If for any reason the function of a tissue is not performed, atrophy of that tissue occurs and fibrous tissue takes its place. In the case of the peritoneum, the endothelium is lost, and its place is taken by fibrous tissue, and when peritoneum is in contact with peritoneum without movement between its apposed surfaces, fibrous tissues will bridge the potential space.

The functions of the peritoneum are brought into action by the respiratory movements, movement of the bowel by its own muscular action, and movement of the body itself.

Respiratory movements are continuous, and for this reason the most important for our consideration. In inspiration the upper half of the abdominal cavity is increased in cubic capacity, because the downward obliquity of the ribs is diminished and they assume a more horizontal direction; the lower half of the abdomen is correspondingly diminished, the anterior muscular wall below the umbilicus becoming less prominent. The diminishing effect to this increase in the upper half produced by the diaphragm assuming a flatter line during inspiration is relatively small. In every complete inspiration the movable small and large intestine is displaced upwards, and in expiration moves down again. In diaphragmatic breathing pure and simple, without any costal breathing, the opposite occurs. During inspiration the upper half of the abdomen is diminished in size from descent of the diaphragm, and the lower half increases owing to the muscular wall being pushed out, and there is in inspiration a downward movement of intestine, with a slight tendency to an upward movement in expiration. The result is that those segments of bowel lying in contact with the floor and sides of the false pelvis lie stagnant. It is here that these two conditions of stellate fibrous patches and enclosed peritoneal spaces are found.

In a large proportion of cases of chronic intestinal stasis in children it will be observed that their carriage of body is that which is so aptly described by Lane as the symmetrical posture of rest. It is the attitude assumed during temporary tiredness of the trunk muscles, and during permanent weakness or loss of tone. The lumbar curve is diminished and the dorsal increased. The lower ribs are less prominent and their downward obliquity is so pronounced that laterally the rib margins approach the iliac crests and the xiphisternal notch is narrow and long. The upper half of the abdomen is constricted and the lower protuberant. During rest breathing is to all intents and purposes diaphragmatic, and only during exertion does costal breathing come into action to a small extent.

I feel sure that the assumption of this attitude in infancy or childhood lays the foundation of the conditions found causing chronic intestinal stasis, and that its course is progressive, unless means are taken to rectify the faulty posture. Assuming the adoption of this attitude in a child for any appreciable length of time, the intestines, large and small, tend to lie at the lowest point possible, pushed down by the descent of the diaphragm to the extent allowed by the stretching of the lower abdominal wall, and returning on relaxation of the diaphragm by the elasticity of that wall. They lack the greater range of movement imparted upwards by the suction force produced by costal inspiration and downwards by the impulse of the muscles attached to the ribs during expiration. The effect of this is that the bowel tends to be continually forced down and to drag on its mesentery; where the lines of force are produced, fibrous bands are formed, and in those places where two peritoneal layers are deprived of movement between their apposed surfaces—namely, the under surface of the mesentery of the terminal loop of the ileum with the parietal peritoneum covering the iliacus and psoas muscle on the right side and the under surface of the mesentery of the sigmoid and corresponding peritoneum on the left side—there the peritoneal endothelium will atrophy from disuse of its function and will be replaced by fibrous tissue which will bridge the potential space between the two layers of peritoneum and account for the two conditions—stellate glistening patches and trapped peritoneal spaces.

The difference between nasal and oral breathing is simply one of resistance. If a child breathing through the nose be watched it will be noticed that the chest expands during inspiration by the action of the muscles attached to the chest wall and the abdomen retracts in its lower part. When a child is breathing through its open mouth the chest does not expand, or very slightly, but assumes the position of full expiration. The abdomen protrudes during inspiration as the diaphragm contracts and in expiration retracts. The alteration in the shape of the abdominal cavity and the change in position of its freely movable contents are reversed in the two forms of breathing. This is due to the resistance to the passage of air through the nasal passage being cut out in oral breathing; the action of the diaphragm by itself is sufficient to overcome the lessened resistance. Strictly speaking, costal breathing is always accompanied by diaphragmatic, but the range of movement of the former is so much larger that the latter exerts little diminishing effect. Diaphragmatic breathing may exist without costal.

Mouth breathing in children seems to have a considerable influence in the formation of the controlling bands and membranes of stasis. Nasal obstruction from such causes as hypertrophy of the tonsils, post-nasal adenoids, deflected nasal septum, and syphilitic necrosis, are the most common causes. Of these, enlarged tonsils (with which adenoid growths are generally associated) far outnumber the latter two, and I am strongly of the opinion that they in the first place are not the causes of mouth-breathing, but are themselves caused by mouth-breathing.

Perhaps the earliest cause in a child's life is the use of handkerchiefs for the purpose of cleanliness. A young baby with his first cold in the head fights bravely to keep breathing through his nose, and even when cyanosed from deficient aëration does not adopt the easy alternative of breathing through his mouth. His nose is roughly seized in a handkerchief and squeezed with the object of expelling the mucus, to his great discomfort and annoyance. A little later, when he is beginning to understand things, and put two and two together, another cold in the head comes; again the handkerchief and antagonism. He then learns that mucus expelled by his natural efforts means physical discomfort by its being wiped away with a handkerchief, and learns to retain the mucus by the simple means of breathing through his mouth and allowing the nasal passages to fill up.

Loss of muscular tone is certainly a frequent cause of mouth-breathing, and occurs after some acute febrile illness, rapid growth, and the result of sitting in faulty positions for long periods during lessons, etc. Rickets, anaemia, and similar conditions also produce the same effect. When muscular tone is lowered the muscles of the trunk which actuate chest breathing are tired, and not only does the child hold himself badly, but he learns that it requires less effort to breath through the mouth.

The tonsils are probably designed to deal with micro-organisms in the mouth, and not with those borne by the air. Their follicles become infected when constantly subjected to infections from the air and hypertrophy follows, pushing up the soft palate and obstructing the posterior nares. Adenoid growth develops when the normal ventilation of the nasal passages is lacking, and infection from the tonsils spreads to the posterior nares.

The symptoms of chronic intestinal stasis are many and varied in different individuals. This is not surprising when we consider that the symptoms are due to auto-intoxication, and that the toxins formed in digestion probably differ somewhat in individuals, not only from the

class of food eaten, but according to the length of delay in the bowel proximal to the controls, allowing fermentative changes to proceed to a further stage. Also in others, owing to the delay in the effluent, micro-organisms other than those usually found are enabled to flourish. The site of absorption may exert an influence on the nature of the toxin. With evidence that the toxin absorbed differs, it follows that the symptoms will vary according to the tissue most affected by the particular toxin absorbed. There is one type of individual markedly tolerant to the action of intestinal poisons, and in whom a great degree of autointoxication may exist without any of the cardinal symptoms being apparent. These people have red or fair hair, and in them the loss of fat, the skin changes, and the mental disturbances are slight, but the circulatory are in evidence. Persons with dark hair go to the other extreme and exhibit little resistance to this toxaemia.

By far the greatest number of symptoms are due to the autointoxication, and the first four mentioned below are so generally found together that they may almost be called the cardinal manifestations of intestinal poisoning.

1. *Skin Changes.*

Generally the skin will be found to be thin, loose, and to have lost its elasticity; when two points are approximated by pressure between the finger and thumb a peculiar morocco-leather-like wrinkling is produced. There is pigmentation, especially of the exposed face and neck, and on the body most marked where pigmentation is natural. There is often a noticeable growth of down-like hair over the whole surface of the body. The skin is often clammy, and the sweat offensive and objectionable in odour.

2. *Loss of Fat.*

There is a great deficiency of fat in the whole body. This is especially marked in children and in women. The subcutaneous fat may even be non-existent, and that in the position of the buttocks, breasts, and pubis very deficient. The peritoneal, mesenteric, and pelvic fat disappears and allows the kidneys, intestines, and pelvic organs to be displaced downwards, the intestinal displacement accentuating any kinks existing.

3. *Impairment of Circulation.*

There seem to be two types corresponding to the effect the toxaemia has produced in the muscular wall of the heart: in the one the hands and feet are cold and white, and the pulse is high tension; in the other the hands and feet are livid and blue, and the pulse tension low. In the latter case there is cyanosis, produced by the breaking down of the red blood corpuscles. Periods of clamminess often supervene. Chilblains are common.

4. *Nervous Manifestations.*

In children there are periods of moodiness or depression, when they often avoid the society of other children, alternating with excitability; the child is said to be highly strung. Headaches in the form of migraine with vomiting are common. The children are bad sleepers and when they sleep soundly always wake the worse of it. Later in life the diagnosis generally made is "neurasthenia." The depression takes the form of the feeling that everything must go wrong in the future, and becomes melancholia; suicidal mania and imbecility may supervene.

The effect of autointoxication on the muscular tissues is that the muscles are soft and flabby and there is a feeling of tiredness and disinclination for any exertion. It is due to this that the symmetrical posture of rest is assumed, which very likely later may become asymmetrical owing to lateral curvatures, etc. As a result of muscular weakness there is produced a condition of loose joints, the range of movements of joints being greater than normal; this is very noticeable in hyperextension of the elbow and lateral flexion of the knees. In children the heart muscle is soft and flabby and the pulse tension low. Slight exertion induces breathlessness and palpitation with irregular heart-beat. Later in life this condition is more confined to women; in men hypertrophy of the heart muscles with high tension pulse is found. The thyroid gland is affected in adults, and probably in children also; this is shown by the deficiency in growth so often met with.

Another set of symptoms is due to the mechanical effect of the stasis itself. The common forms of indigestion—flatulence, heartburn, hiccough, pain—are all due to retention of food in the stomach and duodenum, consequent on their refusing to pass their contents on before the small intestine has emptied itself. The constant retention of food in the duodenum leads to dilatation, and large congestive haemorrhages occur. Haematemesis of large amount is nearly always a congestive haemorrhage and not due to duodenal or gastric ulcer.

Frequency of micturition is a common symptom in children, and is, I think, due to the terminal loop of ileum sagging into the pelvis behind the bladder; the repeated peristaltic waves of this congested portion of bowel endeavouring to empty its contents into the caecum cause a sympathetic contraction of the bladder. These are the cases in which there is no evidence of cystitis.

Complications.

Complications are produced by the spread or advent of micro-organisms to different parts of the body, either due directly to the stasis or to the lowering of resistance caused by the autointoxication.

Pyorrhoea.—It is very doubtful if this can exist except as the result of stasis, and when we consider how a single indigestible meal will be the cause of a dirty tongue and foul mouth it is not surprising that a condition like stasis will cause this micro-organismal invasion between the gums and alveolar processes. By removal of the affected teeth a secondary source of infection is removed and the balance may be restored, a great improvement in health taking place, but the primary condition of stasis remains to break down the restored balance later.

Infection of the gall bladder and its duct, leading later to gall stones. In children this is generally termed catarrhal jaundice.

Infection of the pancreas probably occurs and gives rise to its particular symptoms of indigestion.

Infection of the appendix is perhaps the commonest. First, catarrhal attacks (appendical colic), and later spread of infection to the muscular wall and covering peritoneum (true appendicitis). The majority of cases of appendicitis are associated with stasis and may arise in one of several ways: As a result of a spread of infection to its lumen in the presence of stasis, or the entrance of a foreign body or faecal matter into a patulous appendix produced by such infection. As a result of a kink in the appendix owing to its mesentery being so attached that should any enteroptosis develop a flexure is formed in the appendix by suspension on its tight mesentery, the distal part of the appendix becomes filled with its secretion, which leads first to catarrhal changes, and later to more deep-seated inflammation. Torsion of the mesentery of the appendix may produce gangrene from interference with its blood vessels in much the same condition of mesenteric attachment as the former. In the last two conditions, the short appendical mesentery associated with enteroptosis will have also formed a control in the last few inches of the ileum. The removal of an appendix without recognizing that the appendicitis is but a secondary condition, although one of immediate danger to life, often saves life, which is at the best one of misery, whereas attention at the same time to the primary condition would have rectified this.

Mucous colitis is a very common complication in children.

Another group of complications arises from the resistance of the body being lowered to other infectious micro-organisms, such as staphylococcal infections of the skin in boils and acne; infection by *Staphylococcus citreus* in Still's disease; osteo-arthritis of the joints; tuberculous lesions of every form; infections of kidney and bladder by *Bacillus coli*.

Diagnosis.

Inspection of the abdomen in typical cases will show that it is narrow, flat above and protuberant in its lower part. One or two permanent transverse wrinkles of the skin above the umbilicus are often to be seen, and one, rarely two, half-moon shaped wrinkles, with the concavity looking upwards, below the umbilicus. I have seen these wrinkles in a few cases of cystitis, and their formation is doubtless due to a tonic contraction of the muscles of the anterior abdominal wall, due to some constant tenderness of the intestine or bladder, such as the congested loop in stasis, or the tender bladder in cystitis. The contraction of the anterior muscular wall lessens the distance between

the lower ribs and pubis, and the skin is thus thrown into transverse folds.

The right side of the abdomen is more resistant than the left, and there is some muscular rigidity in the right iliac fossa guarding the tender appendix and terminal loop of the ileum. There will be marked tenderness on deep pressure one or two inches below and internal to MacBurney's point over the congested loop of ileum, and, if the appendix be inflamed, also at MacBurney's point. There is often tenderness over the duodenum.

There is one method of examination by which not only can the existence of stasis be confirmed, but the period of time occupied by the passage of food through any particular portion of the bowel ascertained, together with a good deal of information concerning the condition of the appendix and amount of fixation of the intestines at the kink, and also the state of the mucous membrane and patency of the ileo-caecal valve to backward pressure. This is by means of a bismuth or barium meal with *x*-ray examination.

Treatment.

In children prevention should be our first aim. The maintenance of the correct posture comes before all else. Should there be at any time from any cause a tendency for the symmetrical posture of rest to be assumed it must be checked. Rest, physical exercises, tonics, change of air, must all have their appropriate use. It is important to impress on the child's mind how to hold himself properly; it is not sufficient to tell him to sit up straight or to put his shoulders back, because in attempting to follow either of these two instructions his mind will be concentrated on one action which does not necessarily produce the correct balance of the trunk. If, however, he be taught to hold the lower rib margins prominent to such a degree that if he accidentally collides with a half-open door that is the part he strikes and not his head, the natural curves of the spine are assumed and everything falls into line. Any sign of mouth-breathing should be investigated and the cause removed, as by enucleation of tonsils and removal of adenoids.

When stasis already exists, and the symptoms of auto-intoxication are recognized, should careful examination point to a congenital cause, such as an appendical control, an operation is called for. The appendix should be removed with its mesentery in such a way that the control is relieved. There should be no delay; the earlier it is done the less will development be interfered with by the toxaemia, the less risk will there be of an acute attack of appendicitis intervening prior to the operation, the more easy will it be to break the habit of absorbing poison which the bowel has acquired, and the fewer adventitious bands and membranes will have formed in conjunction with this form of control.

In the acquired form operative interference should be avoided if possible, but each case must be judged on its merits. There is no disease in which vicious circles within vicious circles are more evident, and the problem of the correct point at which the circle should be broken is not always an easy one. Perhaps the original cause of one case was the loss of muscular tone produced by some acute specific fever which led to the child adopting mouth-breathing and using the diaphragm only; infection of the follicles of the tonsils from air-borne micro-organisms followed, causing hypertrophy of those organs, and post-nasal adenoids, which in their turn permanently established the mouth-breathing. This state existing over a length of time leads to adventitious bands and membranes, producing kinks in the intestine directly producing stasis and autointoxication. The autointoxication produces certain muscular degenerations which set the seal on the chance of recovery of the muscular tone. It is not sufficient here to break the circle at one place and remedy the stasis; the obstruction to nasal breathing must be relieved as well.

Nasal obstruction must be dealt with, and a free airway established through the nose. Liquid paraffin should be given before each meal to act as a lubricant and render the passage of the food more easy. Opening medicine, in the form of aperients, purgatives, cathartics, etc., should be avoided, except in the form of an occasional dose for some special reason. Their action in stasis is like flogging a tired horse—the loop is stimulated by irritation to a special effort, and left more paralysed than it was before. The objections raised to paraffin are the frequent actions sometimes produced, the leakage of oil by itself soiling the clothes, and the flatulence provoked. It is as well to impress on the parents that frequency of action due to paraffin does not weaken like diarrhoea, and that the remedy for all these discomforts is to increase the amount or number of doses. Two big loose motions a day should be aimed at, one in the morning, and one towards evening.

Agar-agar mixed with semi-solid food is useful when the point of stasis originates at the sigmoid, and is most marked there. It acts by its affinity for water producing a jelly which, intimately mixed with the faeces, forms a bulky soft motion easily passed through the large bowel.

An abdominal support which keeps out of the pelvis the sagged portions of the bowel in which stasis exists is of the greatest use. Most children themselves recognize its value, and refuse to be without it once they have learned to put it on properly, and even face the ridicule of their schoolfellows rather than give it up.

An hour's rest in the recumbent position in the middle of the day will often help in a wonderful manner. A kink is always accentuated in the upright position, and lying down in the middle of the day breaks the long day in which the trunk is vertical and allows the loop to empty its contents, whereas in the ordinary routine the loop would not empty itself until the recumbent position was resumed at night, and many hours of absorption are thus prevented.

Should these means fail or not suffice after due trial, operative measures will be necessary. The abdomen should be opened and the condition dealt with as found. In dealing with and removing the cause of the kinking, the experience, knowledge, and adaptability of the surgeon becomes the main factor, and it is useless to attempt to describe any set operation for this. The onset of any complication, such as arthritis, tuberculosis, bacilluria, jaundice, is generally an indication for operative measures.

It should be very clearly understood that after an operation for stasis has been performed, however successfully the bowel has been freed from all controls, means must be taken to prevent the original cause or causes from becoming operative again.

Attention must be paid to the non-operative treatment where indicated, and always paraffin should be given for six months to a year. Those portions of the bowel where stasis existed will tolerate delay from custom, and, having acquired the habit of absorption, both the custom and the habit have to be broken; in the same way after the enucleation of tonsils and removal of adenoids, it is necessary to break the habit of mouth-breathing, and unless that is done nasal breathing will not be resumed although the airway is patent.

HEALTH RESORTS FOR THE DIAGNOSIS AND TREATMENT OF CHRONIC AND FUNCTIONAL DISEASES.*

BY

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In discussing the function of health resorts there is both their use for the poorer classes and their use for the well-to-do and leisured classes to be considered. Whether there should or should not be any differences in the employment of health resorts for the two classes I cannot discuss here; the differences exist, and must be accepted for practical purposes. I shall deal with the subject only in respect of the well-to-do classes, and as far as possible I will avoid discussing the important points clearly and ably put forward by Dr. C. W. Buckley in his paper before this Society on March 6th of the present year.[1] Some of my ideas may perhaps be at once relegated by my colleagues to the realm of any good or bad "Upoté"† or "Utopia."

* A paper read before the Balneological and Climatological Section of the Royal Society of Medicine.

† An "Upoté," or, as the learned Erasmus suggested, an "Oudépoté," means a *Never Never Land*, practically, of course, the same as a *Nowhere Land*, that is, "Utopia" of Sir Thomas More. "Erewhon" of Samuel Butler.

A. *Ordinary Uses of Health Resorts.*

An almost endless amount has been written concerning the natural indications for the various climatic and mineral water health resorts in different diseases and morbid conditions. It would be waste of time to go over all this again here; there are many textbooks which constitute a storehouse of information on the subject. But what classes of cases are specially attracted to any particular health resort will, I believe, in the future still largely depend on the local doctors. It is the doctor that knows most about the class of case in question (including the natural course of the disorder and its symptoms), who can likewise make use of the special local resources of the health resort to the best advantage for the individual patient. Naturally, therefore, in my opinion, the progressive part which can be played by health resorts in the future in the social life of a great country will depend largely on the general and special medical ability and experience of the local doctors.

B. *Health Resorts as Places of Prolonged or Permanent Residence for Invalids.*

In pulmonary tuberculosis health resorts are often used as places of residence for the patients, and so also in the case of scrofulous children. Health resorts should also more frequently serve as places of residence for chronic bronchitics, the subjects of chronic rheumatoid arthritis, and chronic invalids of various other categories. Not only will most chronic invalids, if my ideas of future development are correct, be better off, from the medical point of view, at suitable health resorts, where they could always be under the supervision of doctors specially adapted for helping them, but London and other large cities would probably be benefited by their absence. Some chronic invalids might have even two or more health resort homes, residing at one during one season of the year and at another during another season.

Someone may object that chronic invalids often "love to be in London" and that what I advocate would "break up family ties." If health resorts develop in the direction which I indicate, invalids (those who cannot help being invalids) will prefer them to London. At health resorts, more than at any other places, invalids ought to be able to live the fullest life of which they are capable, and I do not forget their mental life. Many invalids are mentally gifted beyond the average. There would be literary, artistic, and scientific "circles," and doubtless cultivated ladies would be found willing to hold *salons*, at which the members of such circles would be specially welcomed. The transactions of the local societies would often rival those of the learned academies of large cities.

But not all at such health resorts would be invalids. The sons and daughters and other healthy relatives and friends would frequently pay visits to the invalid colony, and many healthy persons, apart from doctors and those connected with local business and trade, would carry on the main work of their life there, attracted either by the beauty of the surroundings or wishing to live near invalid relatives or friends. Such places would also always remain suitable resorts for healthy recreation, and would be visited by the young, middle-aged, and old, in need of relaxation and a holiday. For the young and the healthy there would be abundant opportunities for open-air games and sport, as well as for intellectual entertainments, but for mere "loafing" there would be no more encouragement than at any other places.

Members of the learned professions, especially law and medicine, might well spend ample holidays at such places before it becomes too late for them. I feel convinced that many lawyers, physicians, and surgeons die indirectly from overwork. They say that they "cannot" go for a long holiday because their "practice would suffer." It might diminish to some extent, but they are often quite rich enough to afford it; even if some of their clients desert them and their professional rivals become the gainers, the maintenance of their health is much more important to them than such losses. The very clients most dependent on them ought to prefer to lose them for a time than lose them altogether. There are some, I believe, who do not admit that long-continued excess of exciting professional brain work is often a cause of relatively premature death, and I am not aware of the existence of any good statistical inquiry on the subject—for instance, a comparison of the average duration of life in doctors who have been known to take regular holidays with that in doctors (in the same kind of practice) who have practically taken no holidays at all. The latter is, I hope, numerically a fast diminishing class.

C. *Health Resorts as Places for the Diagnosis of Chronic and Functional Diseases.*

As the doctors at different health resorts would have extraordinary facilities for the observation of different classes of cases, certain health resorts should become admirable places for the diagnosis of special diseases. In this the doctors would naturally have all the modern laboratory and other aids to diagnosis at their service, including all methods of blood examination, Roentgen-ray apparatus, methods for the examination of the circulatory organs, for the examination of the digestive organs, and so on. At some health resorts there would be special facilities for the investigation and treatment (including psycho-analytical methods) of functional disorders of the nervous system. The psychic factor in the treatment of ordinary cases at health resorts is often large, as has been pointed out and explained by various writers time after time, so that the acquisition of extra psycho-therapeutic knowledge by the local physicians would not be at all out of place.

People, when not obliged to live in them, will, I hope, become gradually more and more inclined to avoid great cities. Holidays will be largely spent at health resorts; and when one member of a family has a troublesome and somewhat obscure chronic or functional disorder, a health resort for the family holiday will be selected at which the local doctors have a great reputation for their correct diagnoses and successful therapeutical plans for the class of disorders in question.

The health resorts visited during the holidays by families will often be those in which special facilities exist for testing the physical and mental abilities of the younger members. There such questions will be answered as the following: "Is he able to play cricket and ordinary games like other boys?" "Will rowing in a race be dangerous for him?" "Is he mentally able to hold his own amongst other children of the same age?" "Ought he to be educated separately or at a special institution, or can he be sent to school with other boys?" "Ought one to take special care in regard to his heart?" "Is the albuminuria in this case merely orthostatic, and, if so, is the boy or girl in other respects sound and of average physical capability?" "Is he physically up to the standard for the army or navy or Indian Civil Service?" At some resorts the effects of various kinds of violent physical effort would be watched by medical experts capable of coming to a correct conclusion as to whether the exertion is too much or dangerous.

If progress were made in the direction I indicate, chronic dyspeptic symptoms and disorders of the digestive system could be thoroughly investigated at nearly all health resorts, because such troubles are very frequent and troublesome, though often not "dangerous." "What's wrong with this youth? Though tall and rather lanky, he is fairly strong in an ordinary kind of way. But he says he cannot play football in the afternoon like other boys, or only if he goes without his midday meal or the portion of it that he most enjoys (the fruit-pie or pudding). When he plays soon after an ordinary meal, a thin tasteless fluid, like warm water, begins to pour into his mouth (reflex salivation) so quickly that he can hardly swallow it; he has a choking feeling in his throat, and he begins to belch up wind like a neurotic subject of aërophagy. He has himself found out that if he then lies down flat on his back all his discomfort rapidly disappears." Such a case could be investigated during holidays at health resorts. The Roentgen ray skiagrams would probably reveal considerable gastroptosis; owing to the gastroptosis more or less obstruction to the exit of food, together with reflex salivation, may be produced by playing football not long after a fairly copious meal.

I am afraid that these somewhat disjointed remarks form a very inadequate substitute for the address which the President has been unfortunately prevented from giving owing to illness.

REFERENCE.

[1] C. W. Buckley: The Health Resorts and the State, BRITISH MEDICAL JOURNAL, 1919, vol. i, p. 517.

TICK FEVER IN PALESTINE.

BY

F. D. NICHOLSON, M.D.CANTAB.,

LATE CAPTAIN R.A.M.C.(T.C.).

SPIROCHAETOSIS conveyed by ticks has been recognized in Africa since 1904 owing to the researches of Ross, Dutton, and others, who incriminated the tick *Ornithodoros moubata;* similarly, Miana fever in Persia was found by Balfour to be a form of relapsing fever transmitted by *Argas persicus.* I do not think that the relapsing fever which occurs in Palestine has previously been traced to infection by ticks, and the following notes may therefore have some interest.

The advanced troops on that front were infested with lice owing to the rapid advance after the fall of Gaza in November, 1917, and to the impossibility of getting transport for the numerous Thresh disinfectors which had been left behind. Relapsing fever was, in consequence, very rife, and, although rather outside the scope of this note, it may here be mentioned that its clinical characters did not by any means bear out the textbook description.

The parasite measured about 8μ in length, and had a great tendency to form loops, thus conforming to the *Spirillum recurrentis* rather than the longer *S. duttoni* of Africa. The initial fever lasted almost invariably seven days, but the subsequent paroxysms were very irregular in their duration and occurrence; frequently a second or third rise of temperature would only last one or two days, and there were instances of apyretic intervals lasting a month, while three or four relapses were fairly common. In its course the fever thus resembled a hybrid of the European and African varieties. Amongst the white troops the parasite was usually very difficult to find; many fields under the microscope had to be searched, and not infrequently recourse had to be made to the "thick drop" method; in the imported Egyptian Labour Corps, which suffered very badly, the parasite was usually demonstrable in large numbers. The severity of the symptoms did not seem to bear any relation to the number of spirochaetes in the blood. In the worst cases severe epistaxis was a troublesome and alarming complication, but amongst several hundred cases I only saw one death—namely, in a Maori who collapsed directly after his first crisis, although the paroxysm had been unusually mild.

On March 20th, 1918, eight men of the — Suffolks were admitted to hospital suffering from relapsing fever; as it was very unusual to get so many patients from one source at a time, inquiries were made, and it was found that they all belonged to one company of about 250 men, stationed for several days at Ras-el-Ain Castle (mentioned in Acts xxiii, 32, as Antipatris), which was then one of our advanced posts. They further gave the interesting information that they had been bitten by some animals "like sheep ticks, oval in shape and having several legs, which crawled slowly and sucked blood, becoming red." One man had watched two or three feed on his arm, and had then squashed them. Another had shaken several from beneath his trousers in the morning; these were seen to crawl slowly away by several witnesses. They declared they were not lice, with which they were well acquainted, and, finally, they unhesitatingly identified *Argas persicus* from pictures of ticks. The diary of the movements of these men is instructive. They were bathed and their clothes fumigated at Mulebbis on March 10th, 1918. They went to Ras-el-Ain Castle on March 12th, where they remained four days and three nights. They returned to Mulebbis on March 15th, and were bathed and fumigated a second time on March 16th. The initial symptoms appeared on March 19th and 20th.

Four of the patients had shared the same bivouac, the pegs of which were fastened to the outer wall of the castle; a ditch or drain ran under the wall and traversed the floor of the tent. One man occupied the tent next door, and the remaining three slept in an outhouse within the castle walls. Spirochaetes indistinguishable from the parasite met hitherto were found in the blood of all the patients; the clinical symptoms were distinctly modified in comparison with the louse-infected cases, for the men were quite cheerful throughout the paroxysm, and looked at papers on each day of the illness—a very different picture from the ordinary individual, who lay like a log, with eyes suffused, intense headache and backache, hacking cough due to congestion of the bases of the lungs, and complete anorexia. The temperature charts of these tick-infected men were very atypical: several showed a maximum of 102° to 103°, four had a crisis on the fourth day, three reached normal on the fifth day, and one came down by lysis.

The — Suffolks had been relieved by the — Norfolks on March 15th, and a watch was kept for cases of relapsing fever amongst the latter. Six appeared on March 23rd, giving the same history of having been bathed and fumigated before going to the castle, and of having been bitten whilst there by "tick-like insects." By that time a report had been sent to the A.D.M.S., who caused the bivouacs to be shifted thirty yards from the walls, and it is significant that, though troops continuously occupied this spot for the next five months, no further ticks were seen and no other cases of relapsing fever occurred. It will be noticed that the incubation period of the second series of cases was the same as that of the Suffolks—namely, seven or eight days.

Analysis of Patients Admitted to Hospital.

The following is a tabulation of the cases admitted from all companies of the Suffolk and Norfolk Regiments between February 20th and April 12th, 1918 (eight weeks):

	Suffolks.	Norfolks.
Surgical	10 ...	0
Medical	17 ...	18
Relapsing fever	8 ...	6

(*a*) Relapsing fever was rigidly excluded from all the medical cases by repeated examination of their blood.

(*b*) No case of relapsing fever occurred in either regiment, except during the period covered by their stay at the castle.

(*c*) No case of relapsing fever occurred in those companies of the two regiments which did not visit the castle.

The Tick.

Unfortunately it was very difficult to get to the castle owing to its exposed position, but by the kindness of the A.D.M.S. I was enabled to make two or three visits for the purpose of obtaining specimens of the ticks. Scratching and scraping in the interstices of the ancient walls proved of no avail; a puppy was tied up to the walls for several nights but only secured a *Rhipicephalus.* Two fowls were next immured against the wall, and a specimen of *Argas* was obtained the next morning; by mischance the birds were left in the sun and died of heatstroke. They were replaced by another fowl, on whom next morning six hexapod larval forms of *Argas persicus* were found and identified by Dr. Woodcock of the 4th Military Laboratory, whose report on the first specimen is as follows:

One specimen only of the tick has been submitted for identification and examination. This was a young female ("nymph") belonging to the genus *Argas*, most probably *A. persicus*, but as the specimen was not adult the species could not be absolutely determined. The tick contained traces of digested blood, but no evidence of the presence of spirochaetes could be found.

A transfer to India put an end to my investigation. Another tick-infested spot was discovered later in three small caves a few miles from the castle. These caves became part of our front line after an engagement in May, and were used by stretcher-bearers of the —— Field Ambulance as shelter during the subsequent shelling; a crop of cases of relapsing fever suddenly occurred about that period and were all traced to the caves, whose occupants had been bitten by ticks; no member of the field ambulance who had not been in the caves developed spirochaetosis.

ERYTHEMA NODOSUM AND TUBERCULOSIS.

BY

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TUBERCULOSIS OFFICER FOR SOUTH DEVON.

APART from the mere coincidental occurrence of erythema nodosum and tuberculosis, the condition has been recorded following an injection of tuberculin, and under other circumstances in tuberculous patients. I have also noticed erythema nodosum in tuberculosis when for some reason a chronic condition becomes more acute, or at the time when symptoms of tuberculosis first become noticeable in a patient under observation as a contact.

CASE I.

Miss H., a girl clerk, aged 20, developed a cough about February, 1916, but continued at work, and during the summer her cough improved. Early in 1917 the cough returned, with

pyrexia, and after some days a typical eruption of erythema nodosum appeared on the legs. This disappeared in about three weeks, but pyrexia continued for some five weeks, and then gradually subsided. Tuberculosis was suspected, but the patient returned to work later in the year, still in indifferent health. In August, 1918, there was an attack of pleurisy, pyrexia recurred, and continued until her death from pulmonary tuberculosis in March, 1919. When seen, early in February this year, there were extensive physical signs of phthisis, with cavitation and fibrosis on both sides.

The eruption of erythema nodosum in this case coincided with the outbreak of a previously smouldering pulmonary tuberculosis, and could reasonably be attributed to that cause.

CASE II.

Mrs. H., 44, the mother of the girl whose history has just been narrated, had never been very strong, and months spent in nursing her daughter broke down her health. Early in April, 1919, an eruption of erythema nodosum appeared on the forearms and dorsum of the hands, on the legs and feet; at the same time a cough commenced, and pyrexia, reaching to 102° in the evenings. There were also night sweats and progressive emaciation. When seen early in May this year the marks of fading erythema nodosum were visible on the arms and legs. In the chest there were physical signs suggestive of somewhat extensive arrested tuberculosis on the right side, and some signs at the left apex also. The disease quieted down again in a few months.

Here the eruption coincided apparently with the recrudescence of an arrested lesion. It is interesting that a similar condition occurred in mother and daughter.

CASE III.

M. H., a married woman aged 27, was run down and anaemic early in 1913. In April there was an attack of pyrexia and pleurisy, accompanied by a typical eruption of erythema nodosum. Tuberculosis was diagnosed; bacilli were found in the sputum, and the patient was for some months an inmate of Winsley Sanatorium. After this she remained well until August, 1915, when pleurisy recurred, and an exacerbation of tuberculosis, but this time there was no erythema nodosum. In July, 1916, when last seen, the patient was well in health, but there were a few physical signs at both apices.

CASE IV.

In July, 1916, W., the two-year-old daughter of the above patient, had an attack of unexplained pyrexia, accompanied by erythema nodosum. In a month she was well again. No physical signs were detected in the chest, but the child was of a tuberculous type, and had a slight general enlargement of the cervical glands. The probabilities are, therefore, that this attack, which would have to be classified as that type of erythema nodosum which is accompanied by prolonged pyrexia, was due to tuberculosis.

Here also mother and daughter were both affected.

CASE V.

Miss G. is now 27 years old. Her father died of phthisis at 43, and one brother died at 16 of the same disease. At the age of 16 she first became ill with erythema nodosum and pyrexia, and from that time to the present she has been under treatment, intermittently, for pulmonary or glandular tuberculosis. This year she developed a typical erythema induratum on the legs, which is still under treatment.

In this case erythema nodosum and erythema induratum occurred in the same patient after an interval of ten years.

Discussion.

It is not for a moment suggested that tuberculosis is the only cause of erythema nodosum, but merely that a similar cutaneous manifestation may be due to many different poisons, one of which is that of tuberculosis. Moreover, the constitutional peculiarity which gives rise to this skin reaction seems to be inherited, as are other peculiarities—such, for instance, as the well known disposition to epidermolysis bullosa after slight injuries. We find instances of a similar reaction to different poisons in other structures besides the skin. In joints, for example, we may see an identical clinical picture due to different causes, and the same is true of the kidneys, the heart, and the lungs.

Out of 4,000 cases of tuberculosis and contacts under annual observation I have not yet noticed any other skin condition (apart from the well recognized tuberculides) which is definitely connected with tuberculosis. It has been stated that lupus erythematosus is attributable to tuberculosis, and I have seen a few cases of this disease, but not more than would be accounted for by concidence; not more, for instance, than the cases of lichen ruber planus, which no one suggests is due to tuberculosis.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

X RAYS IN THE TREATMENT OF TUBERCULOUS ADENITIS.

I WAS interested to read in the BRITISH MEDICAL JOURNAL of November 29th an article by Mr. E. S. Molyneux on the use of radium in tuberculous glands of the neck.

The results of unaided surgery in such cases can hardly be considered good; recently I came across a case on which fourteen operations had been performed within six years, and a fifteenth was in contemplation. This may be an exception, but half a dozen operations are quite usual, and the cosmetic results leave much to be desired.

The effects of treatment by radium on early cases are no doubt excellent, but the point I wish to make here is that eminently satisfactory results may be attained by *x* rays, which are, as a rule, more readily available than radium. While *x*-ray treatment alone will cure the very early case, it is, in my experience, usually desirable to call in a surgeon when all the periglandular inflammation has subsided, and the glands can only be detected on careful palpation. An operation at this stage—which is usually reached after about six to eight weeks of *x*-ray therapy—is a very simple matter, and the scar should be practically invisible. If the operation be not done, a considerable number of apparent cures will relapse, and do not a second time yield so easily to treatment. Pre-operative treatment, if given with proper dosage and filtration, does not in any way unfit the skin to withstand surgical trauma.

A case in which softening is already present should be dealt with at once surgically, but should be treated by *x* rays very soon after the operation. If this is done, discharging sinuses will heal in a few weeks, instead of taking months, as is sometimes the case if they are left to themselves.

London, W. FRANCIS HERNAMAN-JOHNSON.

A RARE CASE OF LEFT INGUINAL HERNIA.

THE following case is of sufficient rarity and interest to warrant a brief report. Within a left inguinal hernial sac were contained (1) the pyloric end of the stomach; (2) several feet of small intestine; (3) the caecum and appendix.

The patient, a man aged 54, was admitted to the General Hospital, Wolverhampton, on November 12th, 1919, as a case of strangulated inguinal hernia. He had suffered with this hernia for eighteen years, during which time he had had occasional vomiting. This had been almost constant for the week preceding admission, and was accompanied by scrotal pain. On admission he was very ill, indeed almost moribund, and stated that he had been losing weight for two years. He was incessantly vomiting typical dilated-stomach contents. He had a left inguinal hernia the size of an adult head, and this was easily reducible in part. The abdomen was greatly distended and universally hyper-resonant. A distended stomach, probably due to a pyloric cancer, was diagnosed. Under a general anaesthetic the abdomen was opened above the umbilicus. An enormously distended stomach was discovered which occupied almost the entire abdominal cavity. It was incised, and three pints of liquid contents escaped together with a great quantity of gas; even then the pyloric end of the stomach could not be drawn into the wound, but on introducing the left arm into the abdominal cavity the stomach was easily traced into the inguinal hernia, from which it was withdrawn in company with the caecum and appendix, and a great length of small intestine and mesentery. The laparotomy wound was rapidly sewn up, and a radical cure of the 4-in. hernial opening completed. The distal end of the stomach showed a marked constriction corresponding to the level at which the neck of the hernial sac had gripped it.

The patient died within twenty hours. *Post mortem* the stomach was found to be two feet in length, and easily to contain thirteen pints of water. The ascending colon was constricted just distally to the imprisoned caecum. A few proximal feet of the small intestine were distended, the rest collapsed. The mesenteries were very greatly elongated, and the entire colon was pelvic in position. There was no visceroptosis present apart from that of the alimentary canal.

Thanks are due to Mr. Deanesly, under whom the patient was admitted, for permission to publish these notes.

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Reports of Societies.

THE TEACHING OF OBSTETRICS AND GYNAECOLOGY.

(Concluded from page 778.)

IN the Section of Obstetrics and Gynaecology at the Royal Society of Medicine, on December 4th, with Mr. J. D. MALCOLM, the president, in the chair, a discussion took place on the report on the teaching of obstetrics and gynaecology in London, recently made by a committee appointed by the council of the section.* In our last issue a full account was given of the opening statement by Dr. T. W. Eden, chairman of the Committee, and we printed the criticism of the report, drawn up by Dr. Herbert Spencer, Lady Barrett, and Dr. Herbert Williamson, together with the remarks contributed to the discussion by Dr. Spencer.

Dr. H. RUSSELL ANDREWS read a communication on the subject. He said that the old system of midwifery training had turned out a certain number of fully qualified medical practitioners who were nothing less than a danger to the state. Those cases in which skilled help was not called in until brute force had done its worst were some of the most painful he had seen. In some cases irreparable damage was done to the mother before she was sent to the hospital. In some poor-class practices examination before the onset of labour was seldom carried out. It was impossible to believe that these obstetric tragedies could occur more than very rarely in the practice of a man who had as a student spent three or four months in an obstetrical atmosphere. Most obstetric operations were carried out only nominally by members of the visiting staff, and were really performed by the residents. The obstetric physician, who had to manage the out-patient department, give certain lectures and classes, and perform a certain number of gynaecological operations, besides earning his own living, could not go down to the hospital at night and spend a long time over a midwifery case. The midwife had learned the virtue of patience, and of giving the natural forces a fair chance, and the doctor must learn this too. There must be on the spot in the teaching institution a man, senior to the ordinary hospital resident, who had had a thorough training in midwifery, to deal with a certain proportion of the normal cases, and, in the absence of the seniors, with the abnormal cases. There must be more beds, even if in some cases the advantage of being in close touch with specialists of every kind were to be forfeited.

Dr. HENRY BRIGGS (Liverpool) said he was much struck by the candour of the report. He thought that London could not have given out its failings more fully. The failings were so frankly confessed as to disarm criticism. In Liverpool they were in such a position that their difficulties were not so great. He would like to see the general hospitals with their properly equipped obstetric and gynaecological wards. He thought that Dr. Addison would soon settle Dr. Eden's "centres" for him, as a result of popular pressure, by determining to train midwives there.

Dr. J. S. FAIRBAIRN wished to say a few words more in destructive criticism of the alternative report. He considered it really a barren report, because it took them no further than the best of the schools had got. If the best were taken as the model, a little paint and polish would result in the scheme outlined in the criticism. He himself had worked such a clinic as the one the three signatories described, and an account of it would be found in the BRITISH MEDICAL JOURNAL in 1912; yet now Dr. Spencer produced this as something they had got to look forward to. It was a back number even now! The department of sixty beds which the critics of the report suggested was to have the same staff as the one elaborated in the main report, with the addition, however, of a £500-a-year board-and-lodging man of the status of a resident assistant surgeon or physician. The speaker did not know where they were going to find the work for this official. For his own part he went into this Committee convinced that the system recommended in the alternative report was the best, but he modified his view on further consideration of the facts presented.

Lady BARRETT said that, while Dr. Fairbairn had given destructive criticism of the minority report, Dr. Eden had shown a better way—he had illustrated how it was possible to see agreements. The report, which represented certain views that three of them held rather differently from the rest of the Committee, was not published as a full exposition of the whole subject on the part of the three signatories; that would have been unnecessary because they were so largely in agreement with the original report. But the immense importance of the undergraduate students doing their midwifery and gynaecology in the general hospital needed insistence, and she was glad that Dr. Fairbairn fully agreed with the very great importance of that. Post-graduate teaching also was needed, and there were all the new demands for hospital accommodation in the outlying parts of great cities and in country districts. Dr. Eden represented sympathetically the needs of the patients as well as the desires of the teaching schools. Even now, she supposed, it was becoming pretty certain that the provisions of the Insurance Act would be enlarged to meet the demand by general practitioners for hospital-like institutions where consultations could be provided, as well as beds in necessary cases, for all their patients. Here was the weakest point of the Committee's report; the Committee tried to put slender threads between the existing teaching schools in the centre of London, and then vaguely talked of hospitals growing up around. In the near future large institutions would be needed to provide all general practitioners in difficulty with places of consultation on all subjects; and just those districts needing beds for gynaecology and obstetrics needed also beds and consultants for all the other subjects. Therefore she and her co-signatories thought first of all, looking at the matter from the public point of view, that institutions for every branch of medicine would be needed for these outlying districts. Their plan did not differ so greatly as Dr. Fairbairn appeared to think from what Dr. Eden and his colleagues had outlined. But Dr. Eden had rather vaguely collected the general hospital around the obstetric hospital. It would be better to see at once the need for the whole and build the whole institution in the outlying districts, leaving the medical schools who needed it to make the first claim upon it.

Dr. W. S. A. GRIFFITH doubted whether Dr. Eden had ever given a more logical, clearly thought out, and perfect exposition than he had done that evening. He thought also that if those who felt rather strong objections to the criticism from one side or the other tried to follow his lead, they would go some way towards getting rid of their differences and meeting on common ground. If they could arrive at a unanimous conclusion they would have far greater weight in carrying the reforms which they all recognized as necessary. The essential difference between the two parties was the question, on the one hand, of adding maternity wards to the hospitals that had not got them, and enlarging the maternity wards of those that had them; or, on the other hand, if this was found impracticable, of having separate centres. Neither of those who had spoken thus far on the minority report had given any hint as to how the hospitals without maternity wards could provide them. It seemed to him that the minority people were suggesting a scheme which was impracticable. He thought also that it was important if a definite centre was to be formed that it should be done at once or without much delay. He hoped that as a result of that meeting they might still hear from general practitioners who had suffered at their hands as teachers of the points on which they themselves (the practitioners) thought that teaching methods might be improved.

Dr. HERBERT WILLIAMSON, in a written communication, read for him in his absence by Dr. FAIRBAIRN, said that efficiency in teaching was possible in a general hospital which was out of the question in a special institution. The enlightened policy of the Board of Education had made combined research possible, but this would be largely frustrated if the different branches of medicine were cut off from intercommunication. Hence, for the cause of the science and art of practice, the study of obstetrics and gynaecology should be preserved in a general hospital. It was Simpson the obstetrician who gave surgeons the gift of chloroform, and surgeons had given much in return to the obstetrician. If obstetrics and gynaecology were isolated the sense of unity would be imperilled. The post-

* BRITISH MEDICAL JOURNAL, September 27th and October 11th, 1919.

graduate might be encouraged to work in these special institutions, but the undergraduates should not be sent there for part of their general education. It was not the function of the senior teacher to guide the hands of the student in a series of labours, but to lay down the routine and found the traditions of his work; while the senior assistants instilled into him by example and precept what he had to do. The scheme foreshadowed in the report which he with two others had signed presupposed that a larger number of hours would be devoted to the work by senior teachers, and that their remuneration would be increased. Good laboratory facilities were essential, and the services of experts in biochemistry, morbid anatomy, and other specialities must be available for consultation.

Sir ROBERT MORANT remarked that in the survey which the main Committee made on this question in framing their report no mention was made of the possibilities of the Poor Law institutions. This appeared to have been overlooked or deliberately set aside when the Committee started to look round to see what material was available. A good deal of the discussion that evening had been devoted to the kind of hospitals that should be developed and on what lines. Much thought was being given in the Ministry of Health to this very serious and urgent problem. The actual provision of hospitals of whatever kind—maternity or anything else—was at present entirely haphazard. It had been nobody's business to survey the ground. Systematic provision presupposed a systematic survey, taking account of all that was on the ground. If the Poor Law was going to be reformed, the existing institutions, losing all their stigma, and the infectious diseases hospitals maintained by the Metropolitan Asylums Board, would all be brought into survey. No one bit of hospital provision could wisely be considered by itself. Those present were looking at the matter from the teaching point of view; but presumably the whole hospital question was to be analysed. It was complicated at once by this new development of clinics which were, so to speak, out-patient departments dotted about in different places, seldom under the same roof as the hospital; and also the maternity centres which were springing up. He had been amazed at the statement that it would be difficult to get material. At the Ministry of Health they were getting applications from all sorts of people to get their sanction for places with, say, twenty maternity beds, just for normal cases. The question rather was, How was all this material to be dealt with? Those present had got to get their minds on to that. Furthermore, the advice to be given to a central department which had to disburse considerable sums of public money must be advice which was agreed on. Some main lines ought to be unanimously accepted. It would be waste of money and would not be tolerated to spend public funds on pressing forward schemes which could not be shown to be in direct relation to other necessities of bed provision for the metropolis. A careful and scientific hospital survey seemed therefore to be most disastrously overdue. Might he suggest that the obstetricians should urge representatives of other branches of medicine to collaborate with them in order to see how all should fit together? If the profession was not going to be alive and awake to see the problem which was upon them, the Ministry of Health would be prevented from doing for the profession the right thing. The Ministry ought to be provided with a map of a given area to show the different things that should be included. London offered the worst problem of any city in the kingdom because of the multiplicity of authorities. The Ministry was only there to dispense public money; in this country the determining thing was the local authority. The survey must be as inclusive as possible. He urged them to try for an agreed scheme on this question of midwifery and gynaecology, but also to get it related with hospital provision as a whole.

Dr. AMAND ROUTH welcomed Sir Robert Morant's reference to the Poor Law possibilities in connexion with this scheme. He had himself suggested that the infirmaries of the twenty-nine Poor Law institutions of London might be brought in, but Dr. Eden had not thought this practicable. At the same time he himself saw no reason why these Poor Law infirmaries, which were general hospitals on a small scale, should not form the beginning of some of the centres which had been spoken about. If that was what Sir Robert Morant was alluding to it would be very useful to know how that could be managed.

Dr. GORDON LEY dealt with the objection to the Committee's scheme that the provision of the teaching centre would involve large classes. He did not think trouble on this score was likely to arise if, for example, there were four centres, one for each quarter of London. With regard to plenitude of material, he was himself only acquainted with two lying-in centres. One of them was almost reduced to the floor, and the other was always full. It was never suggested that the director of the centre would be able to do ordinary midwifery practice; he was only to be available for consulting work. The enormous population of London was not really appreciated; it had a population greater than that of Ireland, and while the population of Ireland was receding, that of London was increasing. It seemed to him that they required much more space for beds than was actually available, and that they would go on requiring it.

Dr. GEORGE BLACKER said there were two main points to be considered—namely, how could they best increase the accommodation for lying-in women in London, and then how best could they increase the facilities for teaching students? The present provision of lying-in beds was a scandal. There could be no difficulty in filling four of these institutions. There was ample material for any midwifery institution they liked to put up. At the present moment there were large areas where there were no lying-in hospitals of any sort, and there were other areas where, although there were such hospitals, the number of beds was totally inadequate. The provision of sufficient lying-in accommodation was not a matter for them, but for the authorities and the Government. Then how could they best take advantage of this accommodation when provided? They all agreed—both the majority and the minority—that the present teaching of students was utterly bad. Nobody had attempted to deny it. The student had not the same opportunities as in medicine and surgery. Teaching, he maintained, should be done by the staff, never by registrars. He considered that essentially there was very little difference between the two reports.

ANAESTHETICS.

A MEETING of the Scottish Society of Anaesthetists was held in the hall of the Faculty of Physicians and Surgeons, Glasgow, on November 29th, with Dr. PATON BOYD, President, in the chair.

The PRESIDENT read his inaugural address upon "The value of chloroform as an anaesthetic." He desired to bring the subject before the meeting owing to the extreme attitude taken up by the American school of anaesthetists. In the report of the Committee on Anaesthesia of the American Medical Association, in 1912, it was stated:

> (1) That the use of chloroform as an anaesthetic for major operations was no longer justifiable owing to the danger of delayed chloroform poisoning; (2) that for minor operations also the use of chloroform should cease, nitrous oxide and oxygen taking its place; (3) that chloroform was sometimes convenient for inducing anaesthesia in alcoholic or other difficult subjects.

While giving all credit to the American school for their valuable work, Dr. Boyd considered this attitude was extreme, if not absurd. There was a period in Scotland extending over sixty years when chloroform was administered almost exclusively, and yet the surgical results obtained compared favourably with any country in the world. From this fact it was plain that post-operative acidosis could not be the ever-present danger suggested by the Americans. Furthermore, there were many cases to whom it was impossible to administer ether, particularly certain abdominal cases where the necessary relaxation could only be obtained by chloroform. He agreed, however, that it was safer to initiate anaesthesia with nitrous oxide and ether, or ethyl chloride and ether, and that it was really undesirable to use chloroform for short cases where nitrous oxide and oxygen would suffice. Ready-made mixtures of chloroform and ether he did not use; if he desired to exhibit both drugs together, he allowed them to mix only upon the mask. He was a believer in Levy's dictum that in giving chloroform the first principles are to keep the patient fully anaesthetized, and to make the administration continuous. Above all, he considered the safety of anaesthetics depended more upon the man who was giving them than upon the exact drug or method chosen.

In the discussion that followed, the general opinion seemed to be that chloroform should not be administered unless really necessary, but that it often was necessary and might then be given with very reasonable safety so long as sound principles were followed.

The Teaching of Anaesthetics.

Dr. J. S. Ross opened a discussion upon the teaching of anaesthetics. He pointed out that the subject of anaesthetics had in the last ten to fifteen years made great strides. New methods, such as open ether, vapour and rectal oil ether, gas oxygen in its modern developments, and the intratracheal method, had all proved their value, and the whole subject of anaesthetics had been illuminated by the work of Crile upon anoci-association. The increased knowledge should lead to a higher general level of anaesthetizing, but he was not sure that it had done so to the extent which it ought. The special anaesthetist in many schools had not been given the status necessary to enable him to influence work done in the institution, all of which was not necessarily under his own eye. With regard to when and how the subject should be taught, he favoured simple lectures, given to the student as soon as he began his practical surgical work. The practical supervision of administration could not, unfortunately, always be done by a specialist. Since it seemed to be impossible that the specialist should personally teach every student, he ought to concentrate upon teaching a limited number of students very thoroughly, the students selected for this advanced training being those who were in the running for resident posts. No man should become a resident house-surgeon who had not a certificate for advanced anaesthetics. Since so much of the teaching was given in the surgical charges, where most of the operations were of a major nature, minor anaesthetics —that is, short anaesthetics for minor operations—were not as well taught as they should be. The surgical out-patient department should be furnished with several senior students or junior residents who had had an advanced course in anaesthesia.

In the discussion the PRESIDENT approved of the suggestion for an advanced course of anaesthetics for future residents, which Dr. LAMB stated was practically the principle followed in the Victoria Hospital, Glasgow. Drs. JOHNSTON and OGSTON explained the principles upon which the work was done at Aberdeen, where, throughout the summer session, a course of lectures was given, one every week, and every student had to receive practical instruction from one of the anaesthetists to the institution, a special fee being charged. The anaesthetists ranked with the honorary staff.

During the time allotted to unnotified short communications Dr. TORRANCE THOMPSON reported a recent fatality under anaesthesia in a man of 68 with enlarged prostate. He was given closed ether, preceded by a small dose of ethyl chloride. All went well until the gland had just been enucleated, when the patient died suddenly from syncope.

The PRESIDENT described a case which he had had that morning, an apparently healthy woman anaesthetized, also by closed ether, for the removal of a small section of the breast. Almost immediately after the first incision she gave a deep gasp and ceased breathing; the pupils dilated almost to the rim. Both he and the surgeon considered the case very grave, but artificial respiration succeeded after a few minutes. He remarked that this would be a case parallel to that of Dr. Torrance Thompson, in that it was one of reflex syncope with closed ether, undoubtedly a very rare event.

Dr. J. H. GIBBS described an unusual case of pronounced cyanosis in a man aged 23, operated on for double antral disease, under ethyl chloride and ether, preceded by atropine and heroin, and followed by C_2E_8 from a Junker.

ECLAMPSIA.

AT a meeting of the Section of Obstetrics of the Royal Academy of Medicine in Ireland, held on November 7th, Professor HASTINGS TWEEDY, in the course of his presidential address, said that the cause of eclampsia was no longer a mystery. It arose from an overwhelming of the blood food ferments (antibodies) in the following manner: Food antibodies developed shortly after birth in response to an antigen richly present in colostrum and the early food of infants. They were, as a rule, ample for normal requirements, but not unlimited in amount. This was shown by such illnesses as migraine and the drunkard's headache. In pregnancy they had to deal not only with food particles, but also with the albuminous exudate constantly flowing into the blood from the ovum.

For graphic illustration, the President went on, let it be supposed that a woman's blood contains ten antibodies, five of which are required for food digestion, and four are used up by the fetal protein; one remains and all is well. Increase of food will require seven antibodies, and an insufficiency of the latter arises, with consequent toxaemia. Similarly, the ovum may absorb seven, with equally bad results. Milk (which requires three antibodies) is substituted for full diet, and an improvement follows; or, better still, starvation is adopted with complete cure. In rare instances the ovum poison is in such excess that a chronic condition of ill health persists in spite of abstinence from food, then immediate delivery will cure. Caesarean section and induction of labour are both uncertain in their effect unless the patient has previously starved. The poison, consisting as it does of more or less normal protein, cannot be sweated through the skin or excreted through normal kidneys. Blood-letting will remove it, together with antibodies, and the good effect of one becomes neutralized by the bad effect of the other. Fits which start after birth are always the result of the ingestion of milk or other food. The epidemic incidence of eclampsia can best be accounted for by a general increase of appetite owing to change of weather.

In conclusion, Dr. Tweedy claimed that the food origin of eclampsia was beyond controversy; in certain German statistics recently published it was noted that eclampsia was the only disease which had become rarer during the war period, and whilst the population suffered from semi-starvation.

Dr. BETHEL SOLOMONS said that the intestinal toxaemic theory as outlined by Dr. Tweedy was proved by practical experience, but he hoped a real scientific value would soon be attached to the theory. He suggested that knowledge might be gained by a series of examinations of the faeces of the eclamptic as compared with the faeces of the non-eclamptic pregnant woman. He looked on thorough intestinal lavage as the pre-eminent feature in treatment, and he cited a series of thirty successive cures of severe eclampsia which had occurred when he was assistant to Dr. Tweedy as bearing out the intestinal theory. The difficulty in treating the pre-eclamptic patient was sometimes great. The physician had two courses open to him: (1) Keeping the patient for an indefinite time on a water diet; (2) inducing labour. He (Dr. Solomons) favoured the latter course when the patient was away from skilled attendance, for he thought the danger attendant on the departure from the water diet was greater than the possible danger of fits occurring as a direct cause of the induction. Where the patient could be watched carefully the water treatment could be carried out in most cases; in some, however, induction was necessary, while Caesarean section was a last resort.

Sir WILLIAM SMYLY said that the theory propounded by Dr. Tweedy was consistent with and elucidated more of the ascertained facts connected with eclampsia than any of those which preceded it, and its application in practice had given the best results. It was well known, for example, that fragments of syncytium, and, no doubt, other substances derived from the ovum, entered the mother's blood during pregnancy and were digested there, probably by the action of antibodies or ferments. In some cases, however, it would seem that these ferments were not present in sufficient quantity to digest the foreign matter poured into the circulation both from the ovum and intestine, though quite competent to deal with either alone; and that would explain why these cases are benefited by starvation. He had frequently seen serious aggravation in the patient's condition follow the ingestion of even small quantities of food. In a case which he had seen in consultation with Dr. Katherine Maguire the convulsions, which had completely ceased for a week whilst the patient was restricted to water, returned after taking quite a small quantity of milk. Nor was this by any means an isolated case, for he had observed in others, especially in those in the pre-eclamptic condition, an improvement whilst restricted to water, and a deterioration whenever food, even milk, was taken.

Dr. ROWLETTE said that whether Dr. Tweedy's teaching could be supported by experimental work or not, it had in its favour the great test of success in its working, and success in working was the chief test of truth. Dr. Tweedy had, by his method of treatment, reduced the mortality of eclampsia to a negligible figure. It had surprised him (the speaker) to find how slow obstetricians and teachers in other centres had been to recognize the advance that had been made. In some of the London hospitals they were still content with a mortality of 50 per cent., and they did not, in their reports, think it worth while to state whether they fed eclamptic patients or not. He regarded Dr. Tweedy's discovery as to the treatment of eclampsia as the most important advance in medicine that had been made by the Dublin school in the past quarter of a century.

IRRITANT POISON GAS.

AT a meeting of the Glasgow Medico-Chirurgical Society, held on December 5th, the Vice-President, Dr. DOUGLAS RUSSELL, being in the chair, Dr. J. W. MCNEE read a short paper and gave a microscopical demonstration on the pathology of irritant gas poisoning. After pointing out that during the war a much larger number of gases had been employed by the Germans than was generally believed, Dr. McNee described three main forms of gas poisoning.

1. *Chlorine.*—This was the original drift gas used by the Germans, and was dangerous only where troops were quite unprotected, as in the first attack. It acted as a direct irritant of the pulmonary system, causing intense oedema of the mucosa, and, by the coughing and spluttering set up, a disruptive emphysema, with, in addition, a devitalizing effect on the lung tissue. Many of those attacked died in two days practically drowned by the oedema. Those who recovered suffered from acute bronchitis.

2. *Phosgene.*—This was used first as a drift gas and later in shells. It was not irrespirable, and, indeed, might be inhaled in some quantity before its presence was recognized. It was extremely poisonous, causing death in one minute when inhaled in concentrated form. It did not greatly damage the bronchial mucous membrane, but produced an intense oedema of the lung. Two types of cases were observed: (*a*) Men who reacted and displayed a purple lividity; these recovered if well bled, so as to relieve engorgement of the right heart. (*b*) Men who were pale and cyanosed; these died practically at once. Among remoter effects were emphysema and a hyaline thrombosis of the capillaries in many parts of the body—for example, in the walls of the lung alveoli, in the renal glomeruli, and in the brain, where they caused the so-called ring haemorrhages.

3. *Dichlorethylsulphide* (or mustard gas).—This was the best gas from the German point of view, as, though not so fatal, it caused more casualties than all the others put together. The actual substance was a greenish-brown fluid, with a boiling point of 217° C., so that when deposited anywhere it was not easily volatilized, but remained poisonous for five, six, or seven days. Its primary effects were on the bronchial tree—namely, intense inflammation, with necrosis of the mucous membrane and the pouring out of a false membrane like that of diphtheria. This formed a pabulum for micro-organisms, which, growing there, set up bronchopneumonia and abscess of the lung. Among other effects were acute dermatitis and severe conjunctivitis characterized by swelling and oedema, temporary blindness, and, in some cases, opacities of the cornea, which might last for months.

A knowledge of these effects of poison gas was of importance to medical men both in practice and in pensions work, as many of the results were permanent, such as bronchitis (often becoming chronic), asthmatic conditions, fibrosis of the lung (particularly after chlorine or phosgene), and thrombosis or ring haemorrhages in the brain.

Peptic Ulcer.

Dr. JAMES CARSLAW and Dr. JOHN COWAN made a communication on the fatality of peptic ulcer and the importance of early diagnosis.

In a series of 112 cases treated in Glasgow Royal Infirmary during the years 1906–16, 14 patients died as the result of ulceration—a mortality of 12.5 per cent. A similar mortality had been reported by several authors, though figures ranged from 2 per cent. (Leube) to 18 per cent. (Bulstrode). Such figures might not, however, represent the true mortality, as some patients died from causes other than ulcer, and some of the 14 cases referred to might have died after leaving hospital, either from ulcer or from causes indirectly associated with it. *Post-mortem* evidence showed that ulcer was much more common than was appreciated clinically, and that while clinically the majority of cases occurred in women, *post mortem* the majority occurred in men.

In a contrasted series of 30 cases (soldiers) treated in the 3rd Scottish General Hospital from 1914 to 1919, one patient died during his residence, having been admitted with recurrence of haemorrhage and too ill for operation. Of 4 patients submitted to operation, 3 appeared likely to benefit permanently by it, and one unlikely, as widespread adhesions prevented the performance of gastro-enterostomy. Nine patients improved under treatment, but relapsed on ordinary diet and had to be invalided out of the service.

No fewer than 15 of the patients without any serious gastric symptoms showed occult blood in the stools, some for even long periods. Most of these were relieved from their symptoms after a few days in hospital, and all were dismissed "well." These were nearly all young men and suffered from a type of ulceration not likely to be seen in civil hospitals or to receive serious consideration from private doctors. Such cases probably supplied a number of those tragic incidents of sudden severe haemorrhage or perforation, without warning, which every one at times met with, and warranted a plea for special care in the examination of patients suffering from "dyspepsia," and in particular for the examination of the stools for occult blood.

Mr. HENRY RUTHERFURD exhibited illustrations, including skiagrams, of diseases and injuries of the neck of the femur. He showed also a lad of 17, with extreme development of coxa vara. This was said by the patient to have followed a kick from a horse on the left hip, received seventeen months ago, but the more probable etiological factor was an acute osteomyelitis of the right tibia which had occurred about two and a half years earlier. The case illustrated how an osteomyelitis might be followed by a mitigated form of the disease, without pus formation or necrosis, but with softening of the bone.

CONGENITAL OCCLUSION OF BOWEL.

AT a meeting of the Section of Pathology of the Royal Society of Medicine, held on December 2nd, the President, Professor W. BULLOCH, being in the chair, Dr. F. A. TEALE read a paper on the relation of the antitryptic titre of the blood to bacterial infection anaphylaxis.

Dr. B. H. SPILSBURY showed the abdominal viscera of an infant who died three days after birth. There was a congenital defect of the large intestine, which was completely occluded at the splenic flexure. Behind the occlusion the large intestine was distended with thick meconium and its wall was hypertrophied. The upper part of the small intestine was distended with similar material. Beyond the occlusion the large intestine was of normal development and contained a little colourless mucus. The normal bowel was adherent to the occluded end. The specimen showed also general antenatal peritonitis, with partial organization, and with fine but fairly firm adhesions between the viscera. In the midst of the adhesions were found masses of dry, yellow, cheesy material, which was gritty from commencing calcification. The masses consisted of altered meconium, and they pointed to an antenatal perforation of the distended intestine as the cause of the peritonitis, with subsequent closure of the perforation. There was no indication in the wall of the bowel of the site of the perforation. The liver and spleen were covered with a layer of organizing lymph, and a microscopical specimen was shown of the liver in which a group of simple glands lined with goblet cells and resembling the normal glands of the large intestine were seen on the surface of the lymph. It was suggested that these glands had developed from the intestinal epithelium, which had escaped with the meconium into the peritoneal cavity, and, becoming transplanted upon the developing granulation tissue, had reproduced the intestinal glands in that situation.

Microscopical preparations were also shown of peritoneal nodules obtained from two cases of mucocele of the vermiform appendix. The nodules consisted chiefly of mucin containing columnar epithelial cells arranged regularly in rows and exhibiting a tendency towards the formation of glands. The mucin was surrounded and penetrated by a vascular and cellular stroma. It was suggested that the nodules were produced by the transplantation on the peritoneum of intestinal epithelium which had escaped owing to the rupture of the mucocele in each case. A specimen was also shown of a mucocele of the vermiform appendix with a recent perforation at its base; the patient died during the operation for its removal.

DURING the past month there have been three meetings of the Harrogate Medical Society, Dr. BERTRAM WATSON, the President, being in the chair on each occasion. At the first meeting Dr. EDGECOMBE read a paper on the "Modern conception of heart disease." This paper gave a comprehensive survey of the diagnosis, treatment, and prognosis of cardiac disease by modern methods, and was largely based on the author's own experience gained as officer in charge of a section of the Northern Command Cardiac Centre. The two following meetings were devoted to a discussion on "Chronic arthritis," the subject being dealt with under six headings, each of which was introduced by a paper as follows: Etiology by Dr. R. J. Morris, Morbid Anatomy and Nomenclature by Dr. Kerr Pringle, Radiography by Dr. Claud Saberton (illustrated by lantern slides), Bacteriology by Dr. Sinclair Miller, Surgery by Mr. Herbert Frankling, Therapeutics by Dr. Lionel Calthrop. An interesting discussion followed, in which many members took part.

Reviews.

DENTAL SURGERY AND PATHOLOGY.

IN many respects the short preface to Mr. J. F. COLYER'S fourth edition of his *Dental Surgery and Pathology*[1] is the most important chapter of his book. He makes a protest against the "constant performance of dental operations which tend to increase the liability to sepsis." His attainments and reputation as a dental surgeon will ensure that this protest shall not be neglected, and many medical men will be able, from their own experience, to confirm his opinion when he adds: "So-called 'conservative' dentistry aims at the retention of teeth irrespective of whether they are, or may become, a source of sepsis, and is heedless of the prospective danger to the individual which their retention implies."

While the general character of the book remains the same, some parts have been much revised, especially the chapter on irregularities of the teeth, and with the happiest results. Of especial interest is the chapter on the bacteriology of the mouth, written by Dr. N. Mutch. He says:

> Of swallowed organisms only those which come to rest in suitable surroundings survive in the bowel. Chronic infections of the mouth help to evolve races fitted for life in the intestines. Probably the most important instance is that of the infective organism *Streptococcus longus*. Imagine, as often happens, that the gum around a focus of food stagnation becomes infected with this coccus. The bacteria on the surface are repeatedly placed in contact with impacted carbohydrate. Laved in a sugary medium, successive generations slowly acquire the power of preying upon this substrate, and a strain is developed which, although retaining its infectivity, can live freely and multiply rapidly amongst inert carbohydrate residues. At the same time its ability to form acid from the sugar is greatly increased, and by means of this weapon it can destroy a large number of rivals, including *B. coli communis*. Such an organism is especially adapted for the production of chronic infection wherever carbohydrate stagnates in the bowel.

This is a striking passage, giving a reasoned basis for the contention that oral sepsis is the prime cause of many intestinal infections. Perhaps the author will allow us to ask for simpler language.

Throughout the book is well written and well illustrated, but Mr. Colyer seems to have lost himself in subdivision on pp. 137-8-9, while the expression "the defects of septic processes in connexion with the teeth" is not particularly lucid. Fig. 641, purporting to be a section of a chronic abscess, looks to us more like a section of a small suppurating dental cyst. The statement that the inflammatory reaction started by the toxic products of bacteria invariably ends in suppuration (p. 471) seems open to doubt, and the attempt to distinguish between rheumatoid arthritis and osteo-arthritis does not carry conviction. Such defects, however, are quite overshadowed by the general excellence of the book, which can be strongly recommended both to students and practitioners of dentistry, while medical practitioners will find it an excellent work for reference.

[1] *Dental Surgery and Pathology.* By J. F. Colyer, F.R.C.S., L.D.S. Fourth edition. London: Longmans, Green and Co. 1919. (Demy 8vo, pp. xiv + 899; 920 figures. 32s. net.)

WOUNDS OF THE HEAD AND NECK.

IN his book, *Injuries to the Head and Neck*,[2] Mr. H. LAWSON WHALE has made a very useful contribution to the war literature of surgery. Though primarily the work of a specialist for specialists in this region, it should be read with pleasure and profit by the general surgeon. The fourteen chapters cover the war surgery of the throat, nose, ear, face, and jaw; injuries to the brain and eye are only mentioned when one or other overlaps the regions of which the text treats.

Both at Boulogne and at the Queen's Hospital, Sidcup, the author has had a very large experience of the war injuries on which he writes, and on this mass of material he has based many sound rules. His observations on the danger of opening up cervical fascial planes unnecessarily, and on that rare condition vagitis, are of considerable interest, as are those on the accessory sinuses. He lays great stress on the need of thoroughly cleansing these sinuses at the earliest possible date, for cicatricial contraction may later make this very difficult or impossible, and thus greatly hinder subsequent plastic work for which asepsis is essential.

The war has opened up many little-trodden paths in surgery, and in none has it been more productive of progress than in plastic work on the face and jaws. The last few chapters of Mr. Whale's book are devoted to this branch of reconstructive surgery. The book is well illustrated, both by photographs illustrating the progressive stages of "flesh sculpture" and by *x*-ray plates.

CHEMISTRY.

MEDICAL men and others interested in the progress of chemical science cannot do better than read Mr. A. W. STEWART'S *Recent Advances in Physical and Inorganic Chemistry*,[3] the third edition of which has recently appeared. The book contains twenty chapters, each dealing with some special branch of physics or chemistry; the spectroscope, recent advances in our knowledge of the rarer metals, *x* rays, and radio-activity are among the subjects dealt with. It is necessary that the reader should have some knowledge of physics and chemistry before attacking the book; it is full of interest, clearly written, and should appeal to a wide circle. The same may be said of the third edition of the same author's *Recent Advances in Organic Chemistry*,[4] which consists of some fourteen essays dealing with the most interesting of the recent advances made by that science, and with the problems before it in most urgent need of solution. The book is clearly and simply written, and may be read with ease by anybody possessing a quite moderate knowledge of organic chemistry. At the same time it contains enough information to deserve the attention of all serious students of chemistry. Dr. Stewart writes with a soundly critical pen; the fact that his two books have reached a third edition in ten years is a good proof of their utility.

The Physical Chemistry of the Proteins,[5] by Professor T. B. ROBERTSON of California, provides the reader with a complete and intelligible account of the properties of a very important group of substances. The author refines upon the description of proteins in the lump as "colloids," and maintains that the laws applying to the crystalloids are also to a large extent applicable to many of the colloids, some of the proteins forming molecularly dispersed solutions, others yielding only suspensions or emulsions. The book is one for chemists and physiologists, and has the great advantage of not demanding any great knowledge of mathematics for its comprehension; it contains full references to the literature of the subject.

[2] *Injuries to the Head and Neck.* By H. Lawson Whale, M.D.Camb., F.R.C.S.Eng., Captain R.A.M.C.(T.F.), with preface by Colonel F. F. Burghard, C.B., M.D., M.S., F.R.C.S. London: Baillière, Tindall, and Cox. 1919. (Demy 8vo, pp. xii+320; 130 figures. 15s net.)

[3] *Recent Advances in Physical and Inorganic Chemistry.* By Alfred W. Stewart, D.Sc. Third edition. London: Longmans, Green and Co. 1919. (Demy 8vo, pp. xv+284; 23 figures. 12s. 6d. net.)

[4] *Recent Advances in Organic Chemistry.* By Alfred W. Stewart, D.Sc. With an Introduction by J. Norman Collie, LL.D., F.R.S. Third edition. London: Longmans, Green and Co. 1918. (Demy 8vo, pp. xix + 350. 14s. net.)

[5] *The Physical Chemistry of the Proteins.* By T. Brailsford Robertson, Ph.D., D.Sc., Professor of Biochemistry and Pharmacology in the University of California. London: Longmans, Green and Co. 1918. (Demy 8vo, pp. xv + 483. 25s. net.)

The first edition of Professor WALKER'S *Organic Chemistry for Students of Medicine*[6] came out in 1913. The second edition now before us, having on its back the alternative title "Medical Organic Chemistry," is a clearly written, well-considered volume in which the medical student will find an account of all the organic chemistry he is likely to want to learn about during his medical training. The text is not designed, therefore, to fit into the schedule of any particular examination, but deals rather with the general principles of the science and with the particular compounds or classes of compounds of interest to students of medicine. The treatment strikes us as adequate without being too technical.

The seventh edition of the late Dr. WITTHAUS'S *Textbook of Chemistry*,[7] revised by Dr. SCOTT, presents students of medicine and biology with a fairly comprehensive account of inorganic and organic chemistry, together with notes on substances of importance to the toxicologist. The style is simple and straightforward, and the ground is adequately covered; a feature of the text is the free use of equations to show the course of chemical reactions. The book may be recommended to those in search of a textbook of chemistry that goes beyond the requirements of the elementary student, but falls short of what the advanced student needs.

Mr. F. P. SARGEANT'S *Elementary Organic Chemistry*[8] is a little textbook designed for the use of pharmaceutical and medical students. It presupposes a knowledge of physical and inorganic chemistry in its readers, and in the course of ten chapters goes through the main classes of compounds with which students are expected to be familiar. The word "mercaptan," it may be noted, is derived from the Latin *mercurium captans*, not *mercurius* (page 22). The text is clearly written, and the book should be of service to those for whom it is designed.

The third edition of Dr. H. CARLTON SMITH'S *Lecture-Notes on Chemistry for Dental Students*[9] is a large and handsomely appointed volume dealing with such portions of chemical science as have a direct bearing on the subject of dentistry. Particular attention is paid to the metallic salts and to dental metallurgy in the book, which is clearly written and not unduly long. It may be commended to the attention of those for whom it has been written.

The eleventh edition of Professor JAMES WALKER'S *Inorganic Chemistry*,[10] revised and enlarged, is a standard work for the use of elementary students of the subject in schools and colleges, and written on the classical lines. It is the work of an experienced teacher, and, although perhaps a little formal to read, it contains a good presentation and selection of elementary chemical knowledge.

NOTES ON BOOKS.

THE eleventh edition of DORLAND'S useful *Pocket Medical Dictionary*,[11] giving the pronunciation and definition of all the principal terms used in medicine and the kindred sciences, including dentistry and veterinary medicine, may be recommended with confidence to practitioners and students needing a medical lexicon of small size. The present edition contains a few more pages than the ninth, which was noticed in our columns four years ago; space has thus been found for several hundred new definitions of medical and scientific terms, and the book shows signs of careful revision throughout. It is well printed, and considering its size remarkably complete. The popularity of the work may be gauged from the fact that since it first appeared—twenty-one years ago—185,000 copies have been sold. The brief anatomical tables are probably found of service by students in brushing up their knowledge before examination.

Bodily Deformities,[12] Part I, by E. J. CHANCE, F.R.C.S., was published in 1862. A second edition, edited by Mr. JOHN POLAND, F.R.C.S., was reviewed in our columns on July 28th, 1906, p. 404. The second volume of this edition is now before us. The long interval between the dates of publication is, no doubt, partly to be explained by the years of war. Much blood has flowed under the scalpel since the lectures here reprinted were delivered in and after 1852, and, although the accomplished editor has added a number of notes, he must have found it impossible to modernize the work without emasculating it. Yet although Mr. Chance's pathology has been discredited by the progress of knowledge and his treatment much improved upon since the dawn of the Listerian era, such an acute observer as he was, with such exceptionally long experience at the City Orthopaedic Hospital, could not fail to have something to say that is yet worth hearing. The book is, for this reason, still of some interest to orthopaedic surgeons. Mr. John Poland has added to Mr. Chance's lectures reprints of some which he himself has delivered on the treatment of talipes equino-varus. These cannot but be instructive and therefore useful.

Mr. G. E. BARTON'S little book on *Teaching the Sick*[13] is a short and sensible contribution to the problems of occupational therapy and re-education presented to the community by cripples of every sort, whether crippled in the war or no. He takes the robust and practical view that nowadays suitable work and suitable education can be found for all, crippled or sound, if they have the will to learn and to work. He describes in detail how the crippled may be interested in such things as geometrical drawing (which is always valuable to the craftsman or worker), chip carving, modelling, wood working, and poultry farming. The secret of success, as Mr. Barton shows, is to interest the patient, and to give him short periods of work alternating with short rests. We recommend the book to the attention of everybody who is interested in the training or re-education of the crippled.

Dr. WIENER'S book on the symptoms and treatment of malaria[14] contains a commonplace and superficial account of the subject, written from the point of view of a dependant of the Central Powers. The author frequently quotes the names of German writers on malaria, but shows a surprising ignorance of the literature that has appeared in other countries dealing with every aspect of the disease.

THE *Hygiene of Town Planning and Vegetation*[15] is a booklet of quotations and generalities dealing with the importance of adequate town planning from the point of view of public health. It is designed to meet the needs of the general reader.

Dr. ESKUCHEN'S book on lumbar puncture[16] gives a dogmatic account of the employment of this operative procedure in the diagnosis and treatment of disease, with details of the many special reactions and abnormal constituents that may be looked for in the cerebro-spinal fluid withdrawn by its means.

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[6] *Organic Chemistry for Students of Medicine.* By James Walker, LL.D., F.R.S. Second edition. London: Gurney and Jackson; Edinburgh: Oliver and Boyd. 1919. (Demy 8vo, pp. xi + 332; 22 figures. 10s. 6d. net.)

[7] *Textbook of Chemistry: Inorganic and Organic, with Toxicology.* For Students of Medicine, Pharmacy, Dentistry, and Biology. By R. A. Witthaus, A.M., M.D., late Professor of Chemistry, Physics, and Toxicology in Cornell University. Seventh revised edition by R. J. E. Scott, M.A., B.C.L., M.D., Fellow of the New York Academy of Medicine, etc. London: John Bale, Sons, and Danielsson, Ltd. 1919. (Med. 8vo, pp. xii + 477; 18 figures. 20s. net.)

[8] *Elementary Organic Chemistry.* Adapted for the use of Pharmaceutical and Medical Students. By F. Pilkington Sargeant, Ph.C., F.C.S. Second edition. London: H. K. Lewis and Co., Ltd. 1919. (Cr. 8vo, pp. vii + 100. 4s. net.)

[9] *Lecture-Notes on Chemistry for Dental Students.* By H. Carlton Smith, Ph.G., Lecturer on Physiological and Dental Chemistry at Harvard University Dental School, etc. Third edition, revised and enlarged. New York: John Wiley and Sons, Inc. London: Chapman and Hall, Ltd. 1917. (Med. 8vo, pp xi + 455; 38 figures. 13s. 6d. net.)

[10] *Inorganic Chemistry.* By James Walker, LL.D., F.R.S. Eleventh edition, revised and enlarged. London: G. Bell and Sons, Limited. 1919. (Cr. 8vo, pp. viii + 326; 49 figures. 5s. net.

[11] *American Pocket Medical Dictionary.* Edited by W. A. Newman Dorland, A.M., M.D. Eleventh edition, revised. Philadelphia and London: W. B. Saunders Co., Ltd. 1919. (Fcap. 8vo, pp. 717. 7s. 6d. With thumb index, 8s. 6d.)

[12] *On the Nature, Causes, Variety, and Treatment of Bodily Deformities.* A Series of Lectures by the late E. J. Chance, F.R.C.S. Edited by John Poland, F.R.C.S. Vol. ii. London: John Murray. 1919. (Crown 8vo, pp. viii + 338; 141 figures. 18s. net.)

[13] *Teaching the Sick.* A Manual of Occupational Therapy and Re-education. By George Edward Barton, A.I.A., Director of Consolation House and President Consolation House Convalescent Club, Inc. Philadelphia and London: W. B. Saunders Co., Limited. 1919. (Post 8vo, pp. 163; illustrated. 6s. 6d. net.)

[14] *Klinik und Therapie der Malaria.* By Dr. Emmerich Wiener (Budapest). Berlin and Vienna: Urban and Schwarzenberg. 1918. (Sup. roy. 8vo, pp. 126; 34 charts. M 7.)

[15] *Hygiene of Town Planning and Vegetation.* By P. S. G. Dubash, D.Sc., etc. London: G. Bell and Sons, Limited. 1919. (Cr. 8vo, pp. 130. 3s. net.)

[16] *Die Lumbalpunktion.* By Dr. Karl Eskuchen, München-Schwabing. Berlin and Vienna: Urban and Schwarzenberg. 1919. (Med. 8vo, pp. 188; 21 figures, 2 plates. M.8.)

APPLIANCES AND PREPARATIONS.

An Invalid Carrying Chair.

AN invalid carrying chair devised by Mr. Campbell Highet, M.B., C.M., Medical Officer Berks 13 V.A.D., is the outcome of war needs while engaged on convoy duty. It is intended for the carriage, in a sitting position, of invalids unable to walk. The chair consists of three strong but light wood frames, filled in with canvas, the side parts of the seat and leg rest being continued to form the rear and front handles. The leg rest, shown extended in the drawing, is held in place by an angle bracket at each side attached to the seat frame, and allowing free out and in movement. Bent steel supports, strengthened by steel struts, are attached to these frames, raising the chair one foot from the floor. The back, with arm rests attached, can be folded flat upon the seat when the chair is not in use. When shortened, the chair measures 4 ft., and when fully extended, 5 ft. 9 in., the width over all being 1 ft. 8 in. These dimensions allow it to go into a corridor or compartment of a railway train, and it can be carried up and down stairways and along cramped passages unsuitable for a stretcher. It has been found useful in private houses, convalescent homes and sanatoriums. The chair has been tested and approved by the Medical Department of the War Office, being "especially recommended for chest and leg cases, and for transport by trains." It has been for some time in use in the British Red Cross Hospital, Netley; Reading War Hospital; No. 3 General War Hospital, Glasgow; the V.A.D. Hospital, Worcester, etc. It was exhibited at the London Medical Exhibition in October, 1919. A specimen chair will be exhibited in the Red Cross Section of the Imperial War Museum at the Crystal Palace, London, to be opened in 1920. The makers are Messrs. S. Maw, Son, and Sons, Limited, 7 to 12, Aldersgate Street, London.

Fully extended, length 5 ft. 9 in., breadth 1 ft. 8 in.

ROYAL MEDICAL BENEVOLENT FUND.

AT the last meeting of the Committee, held on December 9th, 1919, twenty-seven cases were considered and £343 voted to twenty-three of the applicants. The following is a summary of some of the cases relieved:

Widow, aged 77, of M.R.C.S.Eng. who died in 1891. Only income an annuity of £56 8s. 8d. She pays £16 a year rent. Now unable to do any work owing to loss of eyesight. Voted £12 in twelve instalments.

M.D.Lond., married. Now entirely incapacitated and bedridden. Wife earns £2 2s. a week as a clerk, and obtains a little by selling personal belongings. Rent, £1 1s. a week for six rooms, three of which are given to a man and his wife in return for wife's services during the day, when she looks after the applicant. Voted £26.

Daughter, aged 67, of F.R.C.S.Eng. who died in 1887. Receives £25 from another charity, and lives in a home where she has three rooms and receives £25 a year. Cannot manage owing to the high cost of living. Voted £12 in twelve instalments.

Daughter, aged 55, of M.R.C.S.Eng. who died in 1898. Receives £25 from dividends and £13 from sister. Rent £44 for three rooms, shared by sister. Unable to earn own living owing to ill health. Cannot manage owing to the high cost of living. Voted £5.

Daughter, aged 46, of M.R.C.S.Eng. who died in 1881. Receives £43 from other charities, and £10 from dividends. Used to be a hospital nurse, but now unable to work. She boards with her half-brother. Suffers from ill health. Relieved once, £10. Voted £10.

Daughter, aged 41, of M.R.C.S.Eng. who died in 1914. Only income £20 a year left by grandfather. Lives with mother who is an invalid. Applicant suffers from ill health. Mother receives help from the Fund. Relieved five times, £25. Voted £5.

Daughter, aged 62, of L.R.C.P.Lond. who died in 1872. Only income £26 from another charity, and £6 from friends. Pays £13 a year for a furnished room. Relieved twelve times, £96. Voted £18 in twelve instalments.

Subscriptions may be sent to the Acting Honorary Treasurer, Dr. Samuel West, at 11, Chandos Street, Cavendish Square, London, W.1.

The Royal Medical Benevolent Fund Guild is overwhelmed, in these days of exorbitant prices for clothing and household necessaries, with applications for coats and skirts for ladies and girls holding secretarial posts, and suits for working boys. The Guild appeals for second-hand clothes and household articles for the benefit of the widows and children who, in happier times, would not have needed assistance. The gifts should be sent to the Secretary of the Guild, 43, Bolsover Street, W.1.

THE VOLUNTARY HOSPITALS.

PAYMENT FOR DISABLED PENSIONERS IN VOLUNTARY HOSPITALS.

A DEPUTATION from the British Hospitals Association recently had an interview with the Ministry of Pensions to represent that the existing rates of payment for the treatment of war pensioners at or in hospitals do not now meet the full cost of treatment. The Ministry of Pensions has agreed, subject to the approval of the Treasury, upon the following rates, to come into force from January 1st, 1920:

Rates of Payment by the Ministry of Pensions.

1. The rates of payment shall cover the whole cost of treatment (subject to paragraphs 2 and 3 below) so that no portion of it shall fall or be a charge on the charitable funds of hospitals which undertake the work of treatment of disabled sailors and soldiers. The cost of medical services shall be included in the whole cost. (Provision is taken in the new rates for payment of medical services by the hospitals concerned of an amount not exceeding 25 per cent. of the total gross receipts from the Ministry.)

2. *In-patients.*—There shall be a sliding scale of pay at an increased rate, varying according to the circumstances of the hospital and its cost of maintenance, up to but not exceeding a maximum rate of 11s. per day.

3. *Out-patients.*—For out-patient treatment the existing flat rate of 2s. per attendance shall be continued; and, in order to encourage the institution of evening clinics, the Ministry of Pensions will guarantee a minimum total payment of £2 2s. per session per clinic, irrespective of the number of attendances. In the case of aural or ophthalmic clinics, at which the peculiar nature of the ailment or disability requires active attention and treatment by the doctor personally on each occasion of the patient's attendance, the rate of pay shall be 5s. per attendance as long as the number is below twelve; and for any number above twelve payment shall be at the rate of 3s. per attendance, and the Ministry will guarantee a minimum total payment of £3 3s. per session per clinic.

4. Hospitals which desire increase in the present rates of payment shall be required to provide reasonable evidence in support of their claims; and, in order to minimize the clerical work in this connexion, the Ministry will, on application, provide a form to be filled up.

Applications must be made by hospitals to the Ministry of Pensions on official forms not later than January 1st, 1920. It is recognized that full details cannot be given by that date, but the application must be lodged by then, otherwise the increased rates when granted will not be retrospective to January 1st.

General Financial Position of Hospitals.

The British Hospitals Association has arranged to hold a conference on January 15th to discuss the general financial position of hospitals in various parts of the country and the possibilities of relief of the present difficulties.

King Edward's Hospital Fund for London.

The League of Mercy, which received its charter in 1899, has recently communicated to King Edward's Hospital Fund for London a resolution in which it inquired what action the Fund proposed to take with a view to preserving the London hospitals as voluntary institutions, and expressed its readiness to co-operate in any proper and constitutional action with that object. The following reply, addressed to the Secretary of the League of Mercy, has been received:

Dear Madam,

The Resolution of the Executive Council of the League of Mercy, passed at their meeting on the 20th November, and communicated to the Fund in your letter of November 24th, received the careful consideration of the Executive Committee of this Fund at their meeting on the 1st instant, and I am directed to say that while the Committee fully recognize the special difficulties of the Voluntary Hospitals at the present time, they recall the words of His late Majesty King Edward VII, in the letter in which he inaugurated the Fund—namely:

Public opinion has shown itself upon more than one occasion, and I think wisely, in favour of the maintenance of the voluntary system for support of our hospitals, combined with an adequate system of

representation of the body of subscribers in their control and management. It is obvious, however, that if these institutions are to be saved from State or parochial aid, their financial condition must be secured.

The judgement thus expressed by King Edward formed the basis upon which he founded King Edward's Hospital Fund, and the success hitherto obtained both by the Fund and by the League of Mercy bears witness to its soundness.

In the opinion of the Executive Committee King Edward's words are equally applicable to the present circumstances, and they consider that the most effective way in which both the Fund and the League of Mercy can assist in maintaining the voluntary system is to continue, on their present lines, the work of raising money for the support of the hospitals and of distributing it in such a way as to secure that the greatest possible value is obtained from it both in quantity and quality of benefit for the sick and injured, and in so doing to draw public attention to the needs of the voluntary hospitals and to increase public confidence in their work.

Yours faithfully,
(Signed) H. R. MAYNARD,
Secretary.

THE PEACE LESSONS OF WAR SURGERY.

MITCHELL BANKS MEMORIAL LECTURE BY PROFESSOR A. DEPAGE.

PROFESSOR DEPAGE of Brussels delivered the Mitchell Banks Memorial Lecture before the University of Liverpool on December 12th.

Before proceeding to the subject of his lecture, Professor Depage said that his selection to give the lecture this year was a proof not only of personal esteem for him, but of sympathy and attachment to the Belgian people. Belgium, he said, would never forget that England took up arms to defend her and preserve her liberty. She would retain vivid memories of the welcome given to Belgian people on British soil when, hard pressed by the Germans, they were compelled to leave their native country, and would always remember the first aid given by the British nation, through whose help Belgium was enabled to erect, behind her lines, hospitals which would bear comparison with those of the other allied armies. British contribution had made it possible to erect the hospital at La Panne, in which British nurses had devotedly attended Belgian wounded.

Control of Wound Infection.

Turning then to the subject of his lecture, he said that the treatment of wounds, made by the surgeon himself, had been established by Lister in 1868, and since that date there had been no change except in matters of detail. The wounds of war were already infected when the patient reached the surgeon, so that his task was not to protect the wound from external microbes, but to destroy those already there. Wounds seen in the early days of the war suppurated and healed as a rule by second intention. Two men of superior mind sought to remedy the ignorance which prevailed among surgeons at the beginning of the war. Sir Almroth Wright studied the organic reactions of the infected tissues and strove to increase their microbicidal power, and founded a physiological method of treatment. Dr. Alexis Carrel's ideal was first to sterilize the wound by chemical means — he used a solution of sodium hypochlorite, the formula for which was worked out by the English chemist, Dr. Dakin— and afterwards to suture the wound.

These two methods, and others which were devised, did not, it was found, give the desired results unless the wound was opened up and the damaged tissues excised. To attain success it was necessary to observe certain rules: (1) The evolution of the infection in the wound should be followed by daily bacteriological examination, the results being plotted on a curve; (2) suture should be practised early to prevent secondary infections and to obviate retraction of tissues; (3) in selecting the time of suture the surgeon should be guided by the results of bacteriological examination; it was dangerous to suture when *B. perfringens* was found in the exudation; it usually disappeared in a week or a fortnight. The presence of streptococci contra-indicated suture, and *B. coli* were to be feared. The importance of the Friedländer bacillus and staphylococci depended upon the numbers in which they were present. Uninfected wounds or wounds infected by a non-pathogenic microbe gave 100 per cent. success; those slightly infected by staphylococci gave 95 per cent. success; those infected by *B. coli* 75 per cent., whereas those infected by streptococci gave no more than 7 per cent. success.

Such results showed the importance of laboratory investigations and the necessity of having a clinical laboratory as a part of the equipment of a hospital. Carrel's method had been sometimes improperly applied. The indications for it were limited, but its efficacy in recent infected wounds had been abundantly proved. The method could be applied to industrial accidents; but for this complete equipment, such as the military hospital eventually possessed, must be provided. Great advantages would follow from bringing industrial cases needing careful surgical treatment of this nature into large hospitals where the therapeutic methods which had been found satisfactory in war could be rigorously applied. Two conditions were essential in the application of Carrel's method and could be fulfilled only in a hospital; the first was that Dakin's solution should be prepared in large quantities and used when fresh; the second that the microbe curve should be studied in order to determine the most favourable moment for suture. The treatment of wounds in civil life needed reorganization; such complicating infections as tetanus and septicaemia could always be more efficiently treated in a hospital than in a private house.

Treatment of Fractures.

Great progress had been made during the war in the efficient treatment of compound fractures. Down to 1915 the results of treatment of fractures had been bad; as had been the case in civil practice, suppuration was the rule, and very often the patient's strength was undermined by septicaemia. Cases of compound fracture of the thigh, for example, did not recover in less than six months, usually not under a year, and frequently long immobility determined ankylosis of joints and sclerosis of muscles. After 1915 excision and the application of Carrel's or some other method made it possible to sterilize the wound and to suture it early, an open being thus transformed into a closed fracture. Great improvements in the mechanical treatment of fractures so as to bring the fragments into the best position for consolidation had been achieved during the war, and in both respects civil surgery should benefit. At the beginning of the war surgeons hesitated whether to prefer simple immobilization or immobilization with continuous extension; the question had now been decided in favour of the latter method. There was, Professor Depage said, no doubt that the apparatus of Thomas, Robert Jones, Blake, Delbet, Alquier, Finochietto, and others, would soon definitely replace plaster-of-Paris splints in civil practice.

Wounds of Joints.

Progress had also been made in the treatment of traumatic lesions of the articulations; this was due to the adoption of certain methods: (1) Wide aseptic arthrotomy with excision of the track of the projectile, thorough clearing of the cavity, scraping of the injured bony surfaces, and immediate suture in all recent wounds of the articulations threatened with infection; (2) the application of Carrel's treatment where wide lesions of the soft tissues made suture impossible; and (3) active mobilization in purulent arthritis, as suggested by Dr. Willems of Ghent. Movements of the joint made by the patient himself were not painful and the resuls were remarkable; suppuration diminished rapidly, infection disappeared, and the movement of the joint was preserved, even in cases with deep infection and relatively serious bone lesions.

Chest Wounds.

The treatment of abdominal injuries had not been influenced by the war, though the statistics improved, owing to early operation, made possible by the establishment of advanced posts. On the other hand, surgery of the chest had been notably advanced—rendered simpler and more precise. Surgeons now opened the chest with as much confidence as they opened the abdomen, and a foreign body could be extracted from the lungs as certainly as from the muscles of the thigh. Great progress had been made also in the treatment of purulent infections of the pleura. Operations requiring resection of the walls of the chest had been abandoned for simple closing of the fistula after sterilization of the pleural cavity by Carrel's method.

Peripheral Nerves.

Not much advance had been made in the treatment of wounds of the central nervous system, but much had been achieved in those of the peripheral nerves. The experience gained, the importance of technique, and the observations made in the laboratory had been of so much advantage that suture of the peripheral nerves marked one of the greatest advances realized by surgeons during the war.

Wounds of the Face.

In the treatment of wounds of the face the chief advance had been in relation to fracture of the lower jaw. The results now obtained by collaboration with the dental specialist were incomparably better than those previously obtained.

Artificial Limbs.

Great advance had been made also in the construction of artificial limbs. Makers previously had not studied sufficiently the normal balance of the body, and the result was a fault in the parallelism of the amputated and the sound limb. Research workshops were established, and with the co-operation of the surgeons the construction of artificial limbs had been placed on a physiological basis.

Conclusion.

In conclusion, Professor Depage touched briefly on certain other points. He mentioned the improvements introduced into radiography, especially in respect of the localization of foreign bodies; the addition of curative to preventive treatment of tetanus by serum; the increase in knowledge of the pathology of shock; the treatment of septicaemia, especially streptococcic septicaemia, by injections of peptone by Nolf's method, which would, no doubt, have many applications in civil life; and finally, the establishment of the value of the transfusion of blood in traumatic anaemias and the method by which it should be performed.

Altogether much progress had been made in surgery during the war, and British surgeons and men of science had largely contributed to it. The advance had made it possible to save the lives of a great number of men during the war, and it was to be hoped that through it many more would be saved in time of peace; that would afford some consolation for the sacrifices imposed upon the world.

THE MEDICAL BENEFIT REGULATIONS.

CONFERENCE AT STEINWAY HALL.

A CONFERENCE convened by the Federation of Medical and Allied Societies was held at the Steinway Hall, London, W., on December 12th, to consider the National Insurance Medical Benefit Regulations for 1920, in order to determine whether, in view of certain clauses contained therein, those Regulations as a whole were framed in the best interests of the community and of those who were asked to accept and work under them. Sir MALCOLM MORRIS, who was in the chair, said that the present scheme of insurance was not the best that could be devised, and expressed the view that a committee or Royal Commission should be appointed to devise something better for the public, whose interests were those of the medical profession. He read a letter from Sir Watson Cheyne, suggesting that the decisions of the conference should be sent to the medical members of Parliament; and another from Captain Guest, stating that the Prime Minister would be ready to give sympathetic consideration to the subject.

Dr. E. H. STANCOMB said that the public medical service formed by medical men in Southampton was a success. If that example were followed in other places the doctors would then be able to go to the Government with their own scheme and ask for its support. The profession wanted freedom, especially freedom of choice between doctor and patient. The panel doctor felt more and more that he was a bureaucratic slave and could not therefore give willing service. Local autonomy was, he said, essential to success, and the time was not ripe for a State whole-time medical service.

Dr. GORDON DILL spoke on the effect of the new Regulations upon the whole profession in view of the possible extensions of medical services to the community by the State. He urged that the matter should be discussed on higher grounds than mere pounds, shillings and pence.

Dr. F. COKE, endorsed the remarks made by Dr. Stancomb. Mr. ROWSELL, speaking as a pharmacist, said the question of finance was hampering the working of the Insurance Act. Many appliances which ought to be at the disposal of medical men for insured persons were wanting.

Sir BERTRAND DAWSON, who said he appeared at the meeting in his private capacity, and not in a representative capacity, urged the necessity of the profession becoming united. It must be clearly admitted that the organization of the profession was inadequate to present needs. The Insurance Act had defects, but could it be said that some system of insurance was not essential? What it was necessary to do now was to convert the present system into a better system. The profession did not want a full-time medical service; it wanted adequate provision for good work. So far as he came in contact with the present Ministry of Health there was a general desire to meet the medical profession in a sympathetic spirit. For many years there had been a tendency on the part of the profession to adopt an attitude of suspicion towards the authorities, but on this particular occasion he thought they would be justified in assuming that there was a desire to meet the profession. The spirit of the old Insurance Act was quite dead, and the proposals about to be made were quite different. That alteration in attitude was shown by the setting up of the Consultative Council. It was an entirely new departure for the Government to set up such a body of medical men to give advice from the point of view of those practising medicine, and every endeavour had been made that it should represent knowledge and experience. He thought the profession might be well advised to take the Consultative Council as a model and ask for it to be imitated in various parts of the country. The first reference which the Government made to the Consultative Council was that it should consider, study, and report upon the best method of systematized medical service for this country. The Council would report to the Minister, and an authoritative statement would, he hoped, shortly be issued for the constructive criticism of the profession.

Dr. LATHAM said that the new Regulations had been framed without reference to the great advances made during the war. Medicine could give more to the community than was asked for under the Regulations.

Dr. H. J. CARDALE contended that the Insurance Act worked well in certain poor districts. In Bermondsey, for instance, conditions were much better. He felt confident that the Act would form the basis of a satisfactory service. Dr. RICHMOND expressed a similar opinion.

After some further discussion the following motion by Dr. STANCOMB was carried:

> That in the opinion of this conference of medical and allied organizations the draft Regulations for 1920 proposed to be made by the Minister of Health with respect to the administration of the National Health medical benefit are not adapted to secure the most efficient service from the medical profession nor adequate results to the community.

It was resolved also:

> That the authorities be asked to appoint a committee of inquiry empowered to take evidence on the panel system and on any alternative proposals.

Finally, it was agreed to ask the Prime Minister to receive a deputation the composition of which was left in the hands of the executive committee.

THE annual report of Livingstone College for 1918-19 deals with a year that was full of change. For forty months during the war the college was converted into an auxiliary hospital for convalescent soldiers. This function came to an end with the close of 1918. Since then the college has returned to its proper work of giving training in elementary medicine, surgery, and hygiene to missionaries going to spheres of work abroad far from medical aid. The ordinary session begins each year in October and lasts nine months; there is accommodation for twenty-three resident students. The college is not intended to train men as medical missionaries, and those who enter are required to sign a declaration that they will not adopt this title or otherwise assume the position of a qualified doctor.

British Medical Journal.

SATURDAY, DECEMBER 20TH, 1919.

THE TEACHING OF OBSTETRICS AND GYNAECOLOGY IN LONDON.

THE vexed question of how obstetrics and gynaecology ought to be taught has been very fully discussed during the last few months by the Section of Obstetrics and Gynaecology of the Royal Society of Medicine. It appointed last March a special committee to inquire into the subject; its report was published in our columns on August 30th, p. 277, and September 13th, p. 347. Subsequently a minority report was presented, and published in full in our issue of last week (p. 778). It was read to the Section during the discussion; our account of this, begun last week, is completed at p. 813. We have already drawn particular attention to the majority report because, while it refers primarily and solely to the London schools, the general principles and considerations are applicable everywhere.

A notable feature both of the report and of the discussion was the unanimity of opinion as to the badness of the present position in London. It was only in regard to the remedy that there was some divergence of views, and it is not unlikely that time and a farther exploration of the actual possibilities of the situation will prove these divergencies to be more apparent than real. In the first place it is emphatically maintained, and no one with any knowledge of the facts will dispute it, that more beds are required for the teaching of both obstetrics and gynaecology to medical students in London. In the second place it is unanimously claimed by all the teachers that more time ought to be devoted by the student to these subjects. Four months of the student's whole time is claimed as a necessary minimum. This period does not appear to be an excessive proportion of the curriculum, when there is kept in mind the extent to which midwifery bulks in most general practices, and its importance to the State and the individual alike. The claim to the student's whole time is, however, a new departure, and one which will require to be carefully thought over before it is adopted. No doubt it is ideal from the point of view of the teacher to have his pupils living in a mental atmosphere saturated with the subjects taught, but it seems open to question whether such exclusive study over such a period will not directly foster the idea that the subjects of midwifery and gynaecology are detached from general surgery and medicine. As has been repeatedly pointed out recently, and is wisely emphasized in the minority report, there is already too strong a tendency in this direction, and it is urgently desirable not only to prevent it, but actually to encourage the growth in the student's mind of a broad and balanced conception of the essential unity of medicine, surgery, and midwifery. There was, in the third place, a general consensus of opinion that the two subjects should be taught by the same teachers and in the same institution. It seems unlikely that there will be any serious disagreement with this contention on theoretical grounds. It embodies what will be generally accepted as an ideal to be attained wherever possible. Both in teaching and in practice the two subjects are so intimately related, and have so much in common, that they naturally form a single, if conjoined, department of surgery.

These, then, are the desiderata agreed upon by all the members of the special committee and by all the speakers in the discussion. When we pass to the question of ways and means we discover a cleavage of opinion. It will be recollected that the majority of the committee reported in favour of the establishment, in the congested outlying districts of London, of maternity and gynaecological hospitals or "centres" with some 200 beds each, each centre to be under the charge of a resident director of the standing of an obstetric physician at a teaching hospital. On the other hand the minority report recommends the development in connexion with the existing general hospitals of really adequate "departments" for midwifery and gynaecology. They draw particular attention to the importance of the student's being taught these subjects as part of the work of the one general hospital, and maintain that anything in the nature of geographical separation must lead to that detachment of the subjects from general medicine and surgery which all unite to condemn. With this point of view there will be considerable sympathy, although we need not accept the view of one contributor to the discussion who is reported to have asserted that efficiency in teaching is possible in a general hospital which is out of the question in a special institution. The examples of the great schools of Edinburgh, Dublin, Manchester, and Glasgow where the teaching of midwifery is second to none, and where it is carried out in special institutions, clearly prove the error of such an assertion. At the same time it is probably true that equal efficiency in teaching may be attained with less effort to all concerned and with greater economy of time and work in a general hospital. The minority point of view seems to us to be merely the logical complement of that ideal unity of midwifery and gynaecology which both parties acclaim, and of that greater essential unity in the conception and presentation of all the specialized branches of medical learning which is one of the fundamental necessities of a really good medical education.

Sir Robert Morant was able from his wide administrative experience to lead the discussion more into the realm of possibly practical politics. As he indicated, there are really two questions involved—namely, the teaching of students, and, secondly, the increased provision of maternity and gynaecological beds in London; and while the two questions are intimately interrelated, more progress towards a solution is likely to be made if the dual nature of the problem is kept clearly in mind. The question of hospital provision is one which involves a host of other considerations besides teaching, and, as Sir Robert Morant pointed out, no one bit of the question can wisely be considered by itself. In this very connexion our readers may recall what appeared in these columns last week regarding the establishment in London of "university hospital units," each offering adequate teaching in medicine, in surgery, and in midwifery and gynaecology. This movement would obviously fit in with the minority report, and an economy of effort be thereby achieved. On the other hand it may be doubted whether a sufficiently large number of beds could be provided in this way—either for the needs of the student or for the needs of the population. For, under the conditions of the future, increasing accommodation for normal labours will have to be made in institutions, as women in ever-increasing numbers will claim their right to be confined under conditions of the greatest safety. The maternity

hospital of the future will be less a hospital for dystocia than a lying-in institution for eutocia, in which preventive measures will be more in demand than curative methods.

Is there any real reason why the "centres" scheme should be adopted to the exclusion of the "department" scheme, or vice versa? It seems to us that there is not only room but need for both. But it is probably better policy to begin with the scheme which admits of the prospect of earlier progress. From what has been said in the last paragraph, that would appear to be the "departments" scheme. But by itself this scheme will not be adequate, and in the meantime there is much work to be done in the fuller exploration of the ground in connexion with the possible establishment of women's hospitals of the new type.

POST-GRADUATE CENTRES IN LONDON.

WE gather that since the amalgamation of the Fellowship of Medicine and the London Post-Graduate Association progress has been made towards the elaboration of a permanent scheme for submission to the medical schools and hospitals which will be concerned. There is no doubt about the success of the courses arranged by the Fellowship of Medicine to meet the special conditions existing early this year, when so many temporary medical officers in the various medical services of the British Empire and of the medical corps of the United States of America were in this country. The success of the emergency course was due to the enthusiastic co-operation of the medical schools and hospitals in London, but the medical schools are now more fully occupied in the teaching of students, and opinion seems hardening in favour of a scheme providing that one or more hospitals in London should be entirely devoted to post-graduate work, in association with special courses in special hospitals.

Evidence of this movement of opinion is afforded by a letter published in *The Times* of December 13th, in which the present position and the aspirations of the medical profession are presented to the public. The letter is signed by Sir Clifford Allbutt (President of the British Medical Association and Regius Professor of Physic at Cambridge), Sir William Osler (Regius Professor of Medicine at Oxford), by Sir George Makins (President of the Royal College of Surgeons of England), Sir Bertrand Dawson (Dean of the Faculty of Medicine of the University of London), Dr. J. G. Adami (Vice-Chancellor of the University of Liverpool and until recently a member of the head quarter staff of the Canadian Army Medical Corps in this country), and by Sir Humphry Rolleston (President of the Royal Society of Medicine). The writers hold it clear that to ensure the success of any comprehensive scheme in London it will be necessary to have one or more post-graduate teaching hospitals, adequately provided in all departments, and including laboratories for clinical investigation and pathological research. Time, they say, will not permit of the building and equipment of a new hospital for the purpose. Under present conditions, before it could be finished the post-graduate students for whom provision should be made in this country will have wandered elsewhere in search of what they need; so that the chances are that before London could be ready thousands of them would again have found their way to Teutonic centres, for there can be no doubt that the Central Powers will make frantic efforts to regain what they have lost in this respect. An appeal therefore is made to the Government to help one or more large general hospitals in London to equip themselves exclusively for post-graduate work, and that these should, by co-operation with other medical schools, provide themselves with such a teaching staff as would be second to none, if not superior to any other throughout the world.

The proposal as it stands is in accord with the opinion of the Royal Commission on University Education in London, which spoke of the propriety of organizing, after the university hospital units for students had been established, a hospital as a post-graduate school for the reception partly of graduates from abroad and the colonies, partly of students from other university hospitals who desired to pursue their studies further. Sir George Newman, in his memorandum to the President of the Board of Education on Medical Education in England,[1] has more recently pointed out that for the proper organization of the study of medicine after graduation one of the necessities was to devise a scheme for an imperial post-graduate teaching school in London or elsewhere for foreign and colonial graduates, who formerly repaired to such centres in Germany and Austria, and which would serve both as a teaching school and as a clearing house and central bureau to advise appropriate courses of study and facilitate their provision. Again, in his Memorandum on Preventive Medicine addressed to the Minister of Health,[2] he recurred to the subject, pointing out that post-graduate courses should be comprehensive and well arranged, and of a quality to reach university standard in respect of the teaching staff, the syllabus, and the sustained character and homogeneity of the treatment of the subject.

There is no doubt—as is indeed indicated in these memorandums—that all post-graduates do not want the same thing; some wish to revise or review their general knowledge, some to take a higher degree or diplomas, some to study special subjects. The task before the combined London association is one of no little complexity and magnitude. We agree with the distinguished writers of the letter from which we have quoted that the project is one of imperial significance, but one which the medical profession and the staffs of the teaching schools cannot expect to accomplish without substantial help. As we have attempted to show, there is good reason to hope that any well-considered scheme will have the sympathy and support of the Board of Education, and at least the sympathy of the Ministry of Health; but it is well that the views of the profession should be placed before the general public. As Bacon said, "the ripeness or unripeness of the occasion must ever be well weighed; and generally it is good to commit the beginnings of all great actions to Argus with his hundred eyes."

EPSOM COLLEGE IN THE WAR.

THE Old Epsomians dined together on December 11th under the chairmanship of Mr. Maynard Smith, C.B., who won an Epsom Scholarship in Natural Science in 1893. No similar meeting has been held since the war began, and there was a good attendance. In giving the toast "Floreat Epsomia" the chairman referred to the record of Epsom College in the war. Of the large number who served 133 had laid down their lives. Among them was Brigadier-General R. B. Bradford, V.C., who had attained that rank at a very early age and was killed when only 25. The D.S.O. was won thirteen times, and Captain H. Ll. G. Hughes, received two bars and Lieut.-Colonel L. L. C. Reynolds one. The M.C. was won sixty times, including

[1] H.M. Stationery Office. [Cd. 9124.] Through any bookseller, 9d. net.
[2] H.M. Stationery Office. [Cmd. 363.] Through any bookseller, 6d. net.

three bars, the D.S.C. twice, the D.F.C. twice; the C.B., was received by three old Epsomians, the C.M.G. by three, and the military O.B.E. by eleven. The Croix de Guerre was conferred four times and other foreign decorations eight times. Brevet rank was granted to five, and old Epsomians were mentioned seventy-three times in dispatches, several of them more than once, Captain S. A. Gabb, M.C., six times. The head master, the Rev. Walter J. Barton, in acknowledging the toast, said that the school was in a flourishing condition, the number of boys this term being 309—as many as the school could hold—and it had been necessary to refuse a large number of applications. Many additions and improvements in the building had been made in recent times, but the college chapel was as yet incomplete. The chancel was erected in 1906, and it was now proposed to rebuild the nave in conformity with it as a war memorial. A large sum of money was still required, but he had received a promise of £1,000 on condition that a like sum was subscribed within a limited period. The chairman afterwards referred with regret to the resignation of the honorary secretaryship of the club, which Sir Henry Morris had insisted should be accepted, and sketched briefly the great services Sir Henry Morris had rendered to the school, and proposed his health. Sir Henry Morris, in reply, said that he was among the boys who went to the school in its first term, and that he had been one of the founders in 1871 of the Old Epsomian Club. While his interest in the club had in no way decreased he felt that the time had come when the secretaryship should be in the hands of a younger man, who would be better acquainted with the members of recent generations at the school. Major-General S. Guise Moores, C.B., C.M.G., who was for some time D.M.S. of the Second Army in France, in responding for the guests, spoke of the important services rendered by Colonel Maynard Smith while occupying the position of consulting surgeon with the armies in France.

THE NAVAL MEDICAL SERVICE.

NAVAL members of the Association will recollect that the Naval and Military Committee recently instructed its Naval Medical Service Subcommittee to examine and report on the new regulations for pay and retirement of naval medical officers. The most urgent matter to which the attention of the Subcommittee has been called by correspondents is the position in which certain senior surgeon commanders find themselves under the new scheme as promulgated in Admiralty Orders. It would appear from the report of the Jerram-Halsey Committee that its intention was to give a substantial rise in pension to all officers on retirement. The increase of pension, however, allowed by the new regulations to senior surgeon commanders is, in fact, less than 10 per cent. on the old rate, which was fixed over forty years ago. This increase, moreover, is in certain contingencies subject to a deduction of 20 per cent., the net result of which would be a final reduction of pension by about 10 per cent. Again, representations have been made to the Admiralty with regard to the new ages for compulsory retirement and the consequent loss of full pay service and chances of promotion to higher rank. It has been asked that steps should be taken to reduce the hardship which certain individual officers who are near the top of the list will suffer. This subject therefore formed the basis of an interim report to the Naval and Military Committee at its meeting on November 21st. The Committee instructed the Medical Secretary to send a letter to the Admiralty, based on this report, pointing out how senior surgeon commanders are adversely affected by these regulations. This letter was sent in on December 2nd and was acknowledged. The Subcommittee is fully alive to the fact that whatever is done in this matter must be done quickly, and the attention of the Admiralty has again been called to the urgency of this question, and a request has been made that a reply be given at an early date.

CONJUNCTIVITIS DUE TO FOOD ANAPHYLAXIS.

F. A. CONLON records cases[1] which show that recurring conjunctivits, unaccompanied by any other manifestation, may be produced by the proteins of commonly used foods which hitherto have not been recognized as causes of this disease. These attacks recur year after year, or at a particular season of the year; when this happens some offending article of food, either vegetable or animal, should be suspected. In the cases given the offending foods were proved to be strawberries, tomatoes, eggs, and flounders. The protein skin test of Walker was used for diagnostic purposes. This test consists in making in the arm small incisions an eighth of an inch long, not deep enough to draw blood, applying the suspected protein, and adding a drop of decinormal sodium hydroxide solution to dissolve the protein and permit of its rapid absorption. At the end of half an hour the incisions are washed and examined. A positive reaction consists of a white wheal surrounding the cut of not less than 0.5 cm. in diameter. This test should be made during the attack of conjunctivitis, for in some persons anaphylactic reaction disappears after the patient has abstained from the particular noxious food for any length of time, to reappear on eating it again. One of Conlon's patients definitely proved to Conlon and himself that his conjunctivitis was due to eating strawberries or tomatoes; he actually produced "sore eyes" in a day by this means after a period of abstinence and freedom from conjunctivitis. It is of course essential to correct any ametropia that may be present.

MENINGOCOCCIC PNEUMONIA.

JUST as the war took surgeons "back to Lister" so the influenza pandemic turned the thoughts of some epidemiologists to Sydenham. Dr. M. Greenwood's attractive notes on the doctrine of epidemic constitutions are specially interesting in connexion with the change of type that has been so prominent of late in influenza. Dr. Hamer has ingeniously, if not convincingly, argued that influenza, cerebro-spinal fever, acute poliomyelitis, and other acute diseases, are variants of the same morbid process under special conditions. From a bacteriological point of view, mixed meningococcic and influenzal infections and meningococcic pneumonia have been recognized, and the varying nature—pneumococcic, streptococcic, staphylococcic, and meningococcic—of post-influenzal pulmonary complications have been ascribed to the endemic or epidemic distribution of micro-organisms in the throat. The results of an investigation into the cases of post-influenzal pneumonia in which the meningococcus was isolated, at Camp Coetquidon of the American Expeditionary Force, France, have recently been published by Holm and Davison.[2] Before the influenza epidemic, which lasted from September 1st, 1918, to February 15th, 1919, there had not been any cases of meningococcic meningitis; but many of the men had come from a camp in America where meningitis had been prevalent during the previous winter. On September 3rd a pure growth of the meningococcus was obtained from the lungs of a pneumonic case; on September 20th the carrier rate was high, 16 per cent.; and subsequently 22 cases of meningococcic meningitis occurred. Out of 1,510 cases of influenza admitted to hospital 403 had pneumonia, with 78, or 19 per cent., deaths, and among the 78 necropsies 23, or 29 per cent., showed the meningococcus, 7 in pure and 16 in mixed culture. Altogether meningococci were found in the sputum of 85 cases. The lung changes were usually bronchopneumonic,

[1] *Amer. Journ. of Ophthalmol.*, July, 1919, p. 486.
[2] M. L. Holm and W. C. Davison, *Johns Hopkins Hosp. Bull.*, Baltimore, 1919, xxx. 324-329.

with numerous points in the consolidated areas that exuded purulent fluid on pressure, but six were lobar. On section the consolidated areas had a peculiar pale violet colour that appeared to be almost characteristic of meningococcic pneumonia. Cultures from the pleurae, the pericardium, and the accessory nasal sinuses were negative. Endocarditis was present in more than half of the cases, but, during life, blood cultures were sterile. The leucocyte count was normal or diminished until at a later stage the consolidation diminished and the bronchioles filled with thick muco-purulent secretion. The urine contained albumin and casts, usually early in the course of the disease. The meningococci in the lungs were essentially of the same type as those in the cerebro spinal fluid of cases of meningococcic meningitis.

NITROGEN EXCRETION IN A HOT CLIMATE.

ALTHOUGH a good deal of research has been devoted to diet and nutrition in the tropics, the only detailed work on the partition of the nitrogen in the urine is that of Young, showing that the protein metabolism of the white races in tropical Queensland does not present any well marked variations from that observed in temperate climates. Dr. J. Argyll Campbell,[1] who has for five years been professor of physiology in the Singapore Medical School, publishes further results of analyses of the urine of nine individuals, including a Brahmin, a Chinese, a Tamil, a European, a Malay, a Hindu, a Eurasian, a Bengali, and a Sikh, all attending the Singapore Medical School, who were under observation for two years or more. Race had no influence on the nitrogen partition, the figures for the various races resembling one another fairly closely after making due allowance for the differences in the diets, which were in some vegetarian, in others mixed. The absolute quantities of total nitrogen, of urea nitrogen, and of uric acid nitrogen were much lower than the standard figures for Europe, but the percentages of urea nitrogen and uric acid nitrogen did not differ materially from the standard. In all the cases the percentage of ammonia nitrogen was increased, and often absolutely increased. The diet and water are not responsible for this acidosis, which is tentatively ascribed to the climate of Singapore, where there is no cool season and the temperature averages 80° F. all the year round. Professor Campbell finds that the hot, moist, and still air of Singapore causes great discomfort and a rise in the body temperature; and, as fever is a well recognized cause of acidosis, he regards this acidosis as febrile. The influence of climate on health—an undoubted but often unexplained phenomenon—here receives an explanation which may very possibly be of more than local application. The amount of creatinine nitrogen is slightly lower than the European standard, but the percentage is higher—in some cases much higher—because the reduction in the creatinine nitrogen is much less than the reduction in the total nitrogen. This supports the view that creatinine is mainly of endogenous origin and is not much lowered by reducing the protein intake. The creatinine coefficient (that is, milligrams of creatinine per kilogram of body weight) for Singapore resembles very closely that for Europe.

[1] J. A. Campbell, *Biochem. Journ.*, 1919, xiii, 239-247.

ANCIENT MEDICAL SCHOOLS OF CHINA.

A STATE medical service existed in China as early as the tenth century B.C., and the doctors were divided into four groups—the physicians dealt with internal complaints, the surgeons treated external diseases, wounds, fractures, ulcers, etc., and the dietist looked after food and drink and general hygiene; the veterinary surgeons formed the fourth group. At the end of each year the practitioner had to submit his work to an examining superintendent, who fixed the salary according to the results shown. The lower the death rate, the higher was the pay. The history of the medical schools, which were established in the reign of Sheng Tsung in 1068 A.D., is briefly set forth in an article by Dr. K. C. Wong in the *National Medical Journal of China* (June, 1919). The subjects taught were medicine, surgery, and acupuncture; there were famous lecturers and famous textbooks. All candidates were examined theoretically, orally, and clinically. In the first examination an essay was set, the subject matter of which was from the "Canon of Medicine." The student was required to possess a knowledge of the structure of the human body, the functions of the various organs, the nature and cause of diseases, and the different methods of treatment, such as the use of antipyretics, emetics, purgatives, diuretics, and tonics. In the oral examinations questions were asked from Sheng Nung's "Materia Medica," "Typhoid Fever," and "The Gold Chamber"; the action of drugs, prescription writing, the modes of infection, and the causes of diseases, had to be known. For the clinical examination the candidate was required to produce the results in patients under his treatment and to state the reasons for the measures he had adopted. In the examination six questions were set, one from each of the following subjects: The principles of medicine and surgery, anatomy and physiology, differential diagnosis by the pulse, prescriptions and therapeutics, clinical medicine and surgery, and the influence of the air and the stars. From the results the candidates were classified into four grades; the best were given official appointments or ordered to compile medical books or engaged as teachers; the second were given a licence to practise; those who were not satisfactory had to resume their studies; and those who failed were ordered to seek another profession. A collection of these examination papers is still preserved. Truly the sun shone in China while Europe still slumbered in darkness. Women were first admitted to the practice of medicine in the fourteenth century.

WE are glad to learn that there has been a decided improvement in Sir William Osler's condition during the last week.

THE General Medical Council at its last meeting, as reported in the SUPPLEMENT of December 6th, p. 151, decided that the examinations of the universities and corporations for diplomas in public health and State medicine should be inspected during the next two years. Dr. R. Bruce Low, C.B., D.P.H., has been appointed the Council's inspector for this purpose.

OWING to the approach of Christmas and the requirements of the machine printers, the present issue of the JOURNAL goes to press a day earlier than usual, and we are compelled to hold over a number of communications received this week from readers. Our next number will go to press two days earlier than usual in order that printing may be complete before the Christmas holiday.

Medical Notes in Parliament.

Venereal Diseases.—In the House of Lords, on December 10th, Lord Willoughby de Broke raised a debate on the prevention of venereal disease, which, he said, had increased, was increasing, and ought to be diminished. Lord Sydenham, discussing the incidence of the disease amongst soldiers, expressed the view that the policy of recommending disinfection might succeed, but care must be taken that any announcement made could not be misunderstood by the public. The Archbishop of Canterbury agreed that people should know and realize the gravity of the evil and the necessity of combating infection, but he protested against statements made by some of the supporters of the Society for the Prevention of Venereal Disease, that a section of the so-called religious public actually desired to maintain the disease in order that punishment might follow

the offence. On the other hand, he believed that the danger of promising men supposed security against venereal disease had been underrated. The Earl of Clanwilliam said that, judging from the evidence it had been one of his duties to collect during the war, he believed that the measures taken to prevent venereal disease in the army had been very effective. Viscount Sandhurst, replying for the Government, said that after information as to disinfection had been disseminated in the army and a system had been put to an increasing degree in operation a large number of cases continued to occur. There could be no doubt that the method would be still less efficacious in a civilian population. Even in circumstances specially favourable to instruction, the risk of infection by venereal disease was by no means certainly avoided by the system advocated. The Ministry was not prepared to recommend any specific disinfectant, but was ready to issue advice to the effect that those who had exposed themselves to infection had incurred grave risk, and could diminish that risk to some extent by cleansing themselves immediately and watching carefully for several weeks. He promised to lay on the table of the House papers and figures, together with statistical explanations.

Nurses' Registration.—The Government bill for the registration of nurses (No. 2 Bill) was considered on December 8th on amendments from Standing Committee and was read a third time and passed. The bill was read a second time in the House of Lords on December 15th, on the motion of Lord Sandhurst (Lord Chamberlain), who acts for the Ministry of Health in that Chamber. Lord Ampthill supported it. Lord Knutsford, whilst not opposing the measure, regarded it as inadequate. In fact, he thought that it would not be of use to nurses, as those of inferior training would in the first instance be herded with nurses belonging to the good schools of training. He regretted also that the registration was to be voluntary. There would be nothing to prevent a woman from calling herself a nurse; all that she would be prevented from doing would be to call herself a registered nurse. In his view no woman should be allowed to nurse for gain whose name was not on the register, and no nurse should be put on the register who had not passed an examination after hospital training.

The Notification of Measles.—Dr. McDonald asked the Minister of Health, on December 11th, if he would reconsider his decision to abolish compulsory notification of measles in consideration of the fact that the nation had not yet fully recognized the grave complications resulting from this malady. Dr. Addison said that the effect of the recent circular and order of the Ministry was not quite that which was stated in the question. Any local authority which thought it expedient and made effective provision to meet the circumstances could continue, or adopt, notification; but experience had shown that a universally enforced arrangement had not any sufficiently beneficial result, in the absence of such provision, to justify the great expense entailed. The change was adopted after full consideration, and consultation with persons of wide experience of the problem, and he was satisfied that the steps indicated in the circular would be more effective than the alternative suggested.

Staff of the Ministry of Health.—Dr. Addison stated, on December 10th, in answer to Colonel Gretton, that there were at the Ministry of Health one Parliamentary Secretary, a first and a second secretary, and eleven assistant secretaries. The number and grades of other posts were shown in the estimate. The total number of persons employed in any capacity at the Ministry, including the temporary staff, was 5,411; this figure excluded the staff of the Welsh Board, but included the staff employed by the Ministry in all parts of England.

The Maintenance of Public Hospitals.—Brigadier-General Coldin asked, on December 11th, whether the Government intended to take over the maintenance and administration of public hospitals, and whether, in the event of their doing so, cottage hospitals would be excluded. Dr. Addison replied that the answer to both parts of the question was in the negative.

Insurance Medical Service.—Lieut.-Colonel C. Lowther asked, on December 10th, in what way the medical benefit regulations for 1920 were intended to give an efficient medical service to the insured population, and whether the Minister of Health had considered the effect of restricting the freedom of the panel doctor upon the production of a more efficient service. Dr. Addison replied: The limits of an answer to a question do not permit of the various ways being set forth in which it is confidently believed that the new Regulations will fulfil the object with which they were framed, of improving the efficiency of the insurance medical service. In answer to the second paragraph of the question, I would say that the general approval of the Regulations recently expressed by the Conference of Panel Committees, in a resolution to which there were only three dissentients out of 147 representatives present, affords evidence that this result has been attained without undue restriction on the freedom of the insurance practitioner.

National Insurance (Cost of Administration).—Replying to Mr. Hinds, on December 10th, Dr. Addison said that the ratio of the total cost of administration (local and central) of National Insurance to the total revenue varied very slightly from year to year. The figure for England and Wales for the year 1918 was 11½ per cent. He would produce the separate figures for England and Wales.

Exchequer Grant for Milk Supply.—Dr. Addison said that the provisional estimate of Exchequer contributions for the current year towards the supply of milk to necessitous mothers and children was £50,000; but it was possible that this would be exceeded in consequence of the rise in the price of milk.

National League of the Blind.—In reply to Lieut.-Colonel A. Murray, on December 11th, Dr. Addison said that the Government intended at an early date to introduce legislation which would, amongst other things, include provisions for the amelioration of the condition of the blind; he was consulting the Advisory Committee on the Welfare of the Blind, on which were representatives of the National League of the Blind. He hoped that legislation would be introduced early next session.

MEDICAL RELIEF IN BELGIUM.

A MEETING of the constituents of the Belgian Doctors' and Pharmacists' Relief Fund was held at the Royal Society of Medicine on December 15th, with Sir RICKMAN GODLEE in the chair, to hear the report of work done in Belgium by the Belgian Committee for the assistance of doctors and pharmacists in Belgium. The CHAIRMAN, in introducing Dr. V. Pechère, President of the Belgian Committee, felt sure that everyone would be glad to hear what had been done in Belgium, for, although a number of very detailed accounts of the expenditure had been received from time to time, none had got through for the last eighteen months of the war—a fact which seriously militated against an even flow of contributions to the fund, as subscribers were naturally anxious to know that their money reached the Belgians. He was glad to be able to say that all such subscriptions had been duly received by the Belgian Committee, and that no German benefited by them at all. Lastly, the thanks of the British Committee were due to Mr. Hoover for the splendid way in which he had helped them.

Dr. PECHÈRE began by apologizing for his English, but consoled himself by the thought that the language of the heart was understood by all. His dream had come true—to cross to England and thank the whole British nation for what they had done for the Belgians, both for the soldiers who came over to England and for the civilians who stayed behind. As a representative of the Belgian doctors and pharmacists he wished to thank in their name the President and the members of the Relief Committee. He thought it most remarkable that so much money had been collected, seeing that the Committee here knew very little of what was being done by the Committee in Belgium. The latter had, indeed, made every endeavour to get its reports to England, but too often their attempts were frustrated by the Germans. It was also extremely difficult for the Belgian Committee to get to know what was going on in Belgium, because all communication between towns was stopped, and only Red Cross cars were allowed to travel about, and these only after much formality in the way of special permits. Communication between destroyed towns and Brussels was absolutely prohibited, and it was only at a much later date that the true state of affairs in these towns was known. In Belgium itself some £4,500 had been collected, and £4,000 had been received from other places on the Continent. England had sent between £26,000 and £27,000. In all, about 400 persons had been helped. Five doctors had been murdered by the enemy, and eight pharmacists; about eighty doctors and pharmacists were wounded; a still greater number had been plundered of their all, their houses sacked and burnt, so that they were reduced to the direst extremity. They could not leave the neighbourhood, because the population was dependent on them for all medical service. They could not beg, although they were as badly off as the poorest to whom they ministered. In addition to the material discomforts from which they suffered, they had to put up with mental and moral stress. Separated from their families—for in many cases they had sent these away—they lived in uncertainty as to the fate of their loved ones. The lack of drugs, instruments, and appliances of all kinds was a sore trial, but perhaps the hardest trial of all was having to live under the heel of the hated Prussian. To give an example of the effect of privation on the civilian population Dr. Pechère cited the fact that in 1916 the mortality from tuberculosis had risen from 16 to 34 per 1,000. He could assure all present that he and the people whom he represented, in fact all Belgians, would never forget their debt to England.

A vote of thanks to the speaker was then proposed by Dr. S. SQUIRE SPRIGGE, seconded by Dr. H. A. DES VŒUX, and carried with acclamation. After replying to this, Dr. PECHÈRE announced that his committee still had a little money in hand, which was being gradually expended in relieving cases of need, especially those of widows and orphans, until the Belgian Government had had time to deal with the question of reparation.

Dr. ALFRED COX proposed a vote of thanks to Sir Rickman Godlee for presiding, and added that the Fund owed a deep debt to the chairman of its committee for his energy and sagacity in the conduct of its business. This having been seconded by Dr. F. DE HAVILLAND HALL, the meeting terminated.

HONOURS.

A SPECIAL Supplement to the *London Gazette*, issued on December 12th, contains a further list of awards in connexion with the war, which includes the following medical officers. The fields of operations are indicated.

C.B.

Black Sea.

Lieut.-Colonel and Brevet Colonel (temporary Colonel) William Henry Snyder Nickerson, V.C., C.M.G., R.A.M.C.

For Services Rendered in Connexion with the War.

Colonels: Oliver Long Robinson, C.M.G., K.H.P., late R.A.M.C.; Harry Alexander Hinge, C.M.G., D.S.O., late R.A.M.C.; Herbert John Martin Buist, C.M.G., D.S.O., late R.A.M.C.

C.M.G.

Egypt and Palestine.

Lieut.-Colonel (acting Colonel) Cathcart Garner, C.B.E., ret. pay, late R.A.M.C.; Lieut.-Colonel Percy Samuel Lelean, C.B., R.A.M.C.

For Services Rendered in Connexion with the War.

Colonel Denis Joseph Collins, late R.A.M.C.

D.S.O.

Egypt and Palestine.

Lieut.-Colonels: Robert McNeil Beith, A.A.M.C., attached 2nd Light Horse Field Ambulance; Meylies Wyamarus Cave, A.A.M.C., attached 1st Light Horse Field Ambulance.

C.B.E. (MILITARY).

France and Flanders.

Temporary Lieut.-Colonel Charles Samuel Myers, F.R.S., R.A.M.C.

Egypt and Palestine.

Lieut.-Colonel Robert Henry Walton, N.Z.M.C.

Balkans and the Black Sea.

Mrs. Agnes Moore Livingstone-Learmonth, M.B., R.A.M.C.

For Services in Connexion with the War.

Colonels: Bernard James Newmarch, C.M.G., A.A.M.C.; Russell Tracy-Inglis, N.Z.M.C.

Lieut.-Colonels: (temporary Colonel) Samuel Roy Burston, D.S.O., A.A.M.C.; John Mitchell Young Stewart, D.S.O., A.A.M.C.

Lieut.-Colonels and Brevet Colonels: Samuel John Thomson, C.I.E., I.M.S., Holburt Jacob Waring, R.A.M.C. (T.F.).

Lieut.-Colonels: Monckton O'Dell Braddell, R.A.M.C., Herbert George Cook, R.A.M.C., George Home, O.B.E., N.Z.M.C., Henry Simpson Newland, D.S.O., A.A.M.C.

Temporary Lieutenant-Colonels: James Vincent Blachford, R.A.M.C., Edwin Goodall, R.A.M.C., William Harding, R.A.M.C., *John Keay, R.A.M.C., Harold Andrew Kidd, R.A.M.C., Alexander Simpson, R.A.M.C., *William James Nathaniel Vincent, R.A.M.C., Arthur Blackwood Ward, D.S.O., S.A.M.C.

Major and Brevet Lieut.-Colonel Alfred Wright, ret. pay, R.A.M.C.

*Major (temporary Lieut.-Colonel) Arthur Briton Smallman, D.S.O., R.A.M.C.

Majors: James William Beeman Hodsdon, R.A.M.C.(T.F.), Thomas McKibbon, O.B.E., N.Z.M.C., Arthur William Ormond, R.A.M.C.(T.F.).

Temporary Major Harold Delf Gillies, R.A.M.C.

O.B.E. (MILITARY).

France and Flanders.

Major (acting Lieut.-Colonel) Harry Christopher Sidgwick, R.A.M.C. Major John Herbert Gurley, R.A.M.C.

Captains (acting Lieut.-Colonels): Oswald William McSheehy, D.S.O., R.A.M.C., Henry Charles Deans Rankin, R.A.M.C., James Chambers Sproule, R.A.M.C. Captains: Charles Sefton O'Neill, R.A.M.C., Robert Williamson Asher Salmond, R.A.M.C.(T.F.), Donald Charles Scott, R.A.M.C.

Egypt and Palestine.

Captain (temporary Major) Harvey Sutton, A.A.M.C. Captain (acting Major) Arthur Eaton Richmond, R.A.M.C. Captain Francis Aloysius Comins, A.A.M.C. Temporary Captains: Graham Colville Ramsey, R.A.M.C., Percy Peter James Stewart, R.A.M.C.

Balkans and Black Sea.

Captain (acting Major) Bernard Langridge Davis, R.A.M.C. (T.F.).

Temporary Captain (acting Major) Francis Robert Brown, R.A.M.C.

Miss Edith Blake Hollway, M.B., R.A.M.C.

East Africa.

Lieut.-Colonel Robert Milner-Smyth, S.A.M.C.

For Services in Connexion with the War.

Temporary Lieut.-Colonels: Michael Abdy Collins, R.A.M.C., Samuel Charles Elgee, R.A.M.C., Thomas Saxty Good, R.A.M.C., Alexander Canning Suffern, R.A.M.C.

Major (temporary Lieut.-Colonel) Henry Meredith Buchanan, N.Z.M.C.

Majors: Thomas Lynewolde Anderson, A.A.M.C., Joseph Patrick Fogarty, M.C., A.A.M.C., William Murray MacKay, R.A.M.C., Charles Alexander Morton, R.A.M.C.(T.F.), Robert William Murray, R.A.M.C.(T.F.), William Cochrane Murray, R.A.M.C.(T.F.), Frederick John Oxley, R.A.M.C., George Watson Robertson, S.A.M.C., Thomas Duncan McGregor Stout, D.S.O., N.Z.M.C., Charles Herbert Terry, A.A.M.C.

Temporary Majors: Robert Atwood Beaver, Arthur John Cleveland, Reginald Laidlow Davies, Charles D'Oyly Grange, David Barty King, Hector Duncan MacPhail, Thomas Ricketts Morse, Charles Noon, Arthur O'Neill, John Robert Parry Phillips, Norcliffe Roberts, Henry Robinson, Frederick Millar Rodgers, Stanley Alwyn Smyth, D.S.O., and Frederick Joshua Stuart, R.A.M.C.

Captain (acting Lieut.-Colonel) William Porter MacArthur, D.S.O., R.A.M.C.

Captains (temporary Majors): John Falconer Brown, N.Z.M.C., John Herald Balfour Brown, M.C., A.A.M.C., Frank Arthur Hepworth, R.A.M.C.(T.F.), Kenneth Edwin Tapper, N.Z.M.C.

Captains (acting Majors): Richard Eager, R.A.M.C.(T.F.), Dalziel Buchanan McGrigor, R.A.M.C., Walwyn Thomas, S.A.M.C.

Captains: John Starling Arthur, R.A.M.C.(T.F.), Henry Edmund Gaskin Boyle, R.A.M.C.(T.F.), George Finlay, A.A.M.C., Gerald Alfred Child, R.A.M.C.(T.F.), Sidney Herbert Daukes, R.A.M.C.(T.F.), William Lennox Gordon, S.A.M.C., William John More Slowman, R.A.M.C.(T.F.), Horace George Turney, R.A.M.C.(T.F.).

Temporary Captains (acting Majors): Charles Calthorp de Burgh Daly, R.A.M.C., Henry Rubert Mullins, S.A.M.C., Horace Bagster Wilson, R.A.M.C. Temporary Captains: William Leigh Maule Day, R.A.M.C., Henry Devine, R.A.M.C., Alexander William Hendry, R.A.M.C., Charles Ravenscroft Stewart, R.A.M.C.

M.B.E. (MILITARY).

Egypt and Palestine.

Temporary Mulazim Awal Salama Yusef Effendi El, Egyptian A.M.C.

For Services in Connexion with the War.

Major Arthur Hosking, N.Z.M.C.

Captains: Innes Wares Brebner, S.A.M.C., Percy Chisholm, N.Z.M.C., Sydney Hartley Hay, N.Z.M.C., Henry Echley Herbert Oakeley, S.A.M.C., Henry Caldwell Tait, N.Z.M.C.

Temporary Captain George Edward Kinnersley, R.A.M.C.

MILITARY CROSS.

Egypt and Palestine.

Captains: John Graham Gow, N.Z.M.C., attached Wellington Mounted Rifle Regiment, Thomas Pollock Inglis, R.A.M.C. (S.R.).

Balkans and Black Sea.

Captain George Mundell Hetherington, R.A.M.C.(S.R.).

Temporary Captains: James Ernest Finlay, R.A.M.C., Harold Ernest Heapy, R.A.M.C.

TO BE BREVET LIEUTENANT-COLONEL.

Balkans and Black Sea.

Major (acting Lieut.-Colonel) O. Ievers, D.S.O., R.A.M.C.

For Services in Connexion with the War.

Major H. F. Horne, T.D., West Riding Divisional Sanitary Section, R.A.M.C.(T.F.).

TO BE BREVET LIEUTENANT-COLONEL ON PROMOTION TO SUBSTANTIVE MAJOR.

For Services in Connexion with the War.

Captain A. R. Wright, D.S.O., R.A.M.C.

TO BE BREVET MAJOR.

For Services in Connexion with the War.

Temporary Captain E. A. Aldridge, M.C., R.A.M.C.

* Substituted for announcement in the *London Gazette*, June 3rd, 1919.

THE following are the statements of gallant and devoted services for which the decorations announced in the *London Gazette* of April 2nd, 1919, were conferred:

Distinguished Service Order.

Captain (acting Major) William Barnsley Allen, V.C., M.C., R.A.M.C., attached 1/3rd (West Riding) Field Ambulance, R.A.M.C.(T.F.).

For conspicuous gallantry and devotion to duty during the fighting west of Saulzoir for the Selle River line between October 11th and 14th, 1918. He showed a very high degree of fearless initiative in organizing the collection of wounded from ground under continuous hostile shell fire, and by his inspiring example, untiring energy, and contempt of danger, he was able to move large numbers of helpless wounded from positions of danger before he was himself gassed.

Major Archibald Craig Amy, R.A.M.C., attached 2/1st (Highland) Field Ambulance, R.A.M.C.(T.F.).

For conspicuous gallantry and devotion to duty on October 24th, 1918, at Douchy, when in charge of the advanced dressing station there. The town was shelled with high velocity guns for four hours, many shells bursting in the vicinity of the advanced dressing station, one shell causing twenty one casualties. A large number of wounded were brought in, and by his coolness and energy he prevented any confusion resulting, and cleared his advanced dressing station successfully.

Major John Freeman Blair, Canadian Army Dental Corps, attached 4th Field Ambulance, C.A.M.C.

For conspicuous gallantry and devotion to duty from November 5th to 11th, 1918, in the Valenciennes-Mons area, as liaison officer between regimental aid posts and forward collecting posts. Keeping in close touch with the rapidly advancing infantry, he was continuously under fire, but ensured the rapid evacuation of the wounded. On several occasions he dressed the wounded in the open under fire, remaining to superintend their removal on the arrival of the stretcher-bearers.

Temporary Captain (acting Major) Ronald Campbell Cooke, M.C., 134th Field Ambulance, R.A.M.C.

He was always equal to the occasion when, owing to considerable advances made by our troops, fresh organization and alteration of schemes of evacuation were demanded to meet the conditions, and his unit was short-handed. His skill and fine devotion to duty over a difficult period were admirable.

Major Burnet Elmer Kelly, 9th Field Ambulance, C.A.M.C.

For conspicuous gallantry and devotion to duty from October 22nd to 30th, 1918, between Raismes and Bruay. In charge of the evacuation of wounded of the 9th Canadian Infantry Brigade, he personally went over the field, night and day, with his stretcher-bearers, collecting wounded, most of the time under machine-gun and shell fire. His energy was an outstanding example to all ranks.

Temporary Captain John Hay Moir, M.C., R.A.M.C., attached 17th Battalion Royal Fusiliers.

For conspicuous gallantry and devotion to duty on September 27th, 28th, and 29th, 1918, near Noyelles. On the 27th, while a stretcher party moving to the rear received a direct hit, he rushed out to its assistance and attended to the survivors under intense shell fire, carrying them to a place of safety. On the 28th he worked his aid post under concentrated fire, dressing the wounded in the open after the cellar was full. He was very badly shaken by a shell burst, but carried on his work into the night, and assisted to pick up wounded in a counter-attack. Although utterly exhausted, on the 29th he continued attending the wounded with energy and determination.

Major George Willard Treleaven, M.C., 4th Field Ambulance, C.A.M.C.

For conspicuous gallantry and devotion to duty from November 5th to 10th, 1918, in the Valenciennes-Monsana, in charge of the evacuation of casualties from the forward area of the division. For five days he was continuously under fire in the open, selecting aid posts, and superintending the evacuation of the wounded. He frequently led stretcher parties forward across open ground fully exposed to enemy fire, and his disregard of danger was a splendid example to all ranks.

Second Bar to the Military Cross.

Captain Robert Bell Stewart, M.C., R.A.M.C.(S.R.), attached 55th Field Ambulance.

For conspicuous gallantry near Preux aux Bois and Hecq on November 4th, 1918. He was in charge of a division of stretcher-bearers when, finding the attack held up, he went forward alone to reconnoitre. He organized the evacuation of wounded under heavy fire, and pushed on into the Forest de Mormal to reconnoitre roads for the purpose of getting wounded back. Throughout that day by his energy and devotion to duty all casualties were expeditiously got away. (M.C. gazetted January 14th, 1916; first bar gazetted January 18th, 1918.)

Bar to the Military Cross.

Captain (acting Major) Joseph Herbert Bayley, M.C., R.A.M.C. (S.R.), attached 76th Field Ambulance.

For conspicuous gallantry and devotion to duty near Landrecies on November 3rd, 4th, and 5th, 1918. Throughout this period he worked without rest, personally visiting regimental aid posts and relay posts under heavy fire. The fine example he set inspired all who worked under him, and his efforts ensured the rapid evacuation of all the casualties of the division. (M.C. gazetted June 4th, 1917.)

Temporary Captain Eric Biddle, M.C., 91st Field Ambulance, R.A.M.C.

During the recent operations in the neighbourhood of Happegarde-Ors and the crossing of the Oise-Sambre Canal he was continuously in charge of the R.A.M.C. bearers. On November 2nd, 3rd, and 4th, 1918, his brigade attacked each day with many casualties. Throughout this time he kept in touch with all the regimental medical officers of his brigade, visiting them frequently, though the roads were continuously under heavy shell and machine-gun fire, and by his energy and disregard of danger effected rapid evacuation. (M.C. gazetted June 18th, 1917.)

Captain (acting Major) Thomas William Clarke, M.C., R.A.M.C. (S.R.), attached 148th Field Ambulance.

For conspicuous gallantry and devotion to duty at the Canal du Nord in front of Moeuvres on September 27th, 1918, when in charge of the evacuation of wounded of an infantry brigade. He took the bearers across the canal immediately behind the infantry, the while exposed to heavy machine-gun fire from an exposed flank. He was successful in relaying the wounded from the regimental aid post to the canal bank, and so enabling the wounded to be cleared from the field rapidly. (M.C. gazetted March 27th, 1915.)

Captain (acting Major) Henry Norman Goode, M.C., 1/1st (West Riding) Field Ambulance, R.A.M.C.(T.F.).

From October 29th, 1918, till the morning of November 3rd, 1918 he was in command of the bearers clearing the divisional front. He was under shell fire daily, and was buried by a shell on October 30th. Throughout the whole time he worked day and night with short intervals for rest, setting a fine example of fearless devotion to duty. (M.C. gazetted September 16th, 1918.)

Temporary Captain (acting Major) Charles Hope Haddow, M.C., 77th Field Ambulance, R.A.M.C.

For conspicuous gallantry near Basuel, on October 23rd, 1918, when he repeatedly brought up his bearers to the regimental aid post in face of very heavy shell fire, and managed to get away the wounded lying there. It was entirely due to his untiring efforts that the wounded of the brigade were cleared from the battle front. His fine work enabled many lives to be saved. (M.C. gazetted September 16th, 1918.)

Temporary Surgeon Charles Edward Leake, M.C., R.N., attached "Hawke" Battalion R.N.D., R.N.V.R.

During the operations of September 27th–29th, 1918, he carried out his duties with untiring energy and total disregard for personal safety. On many occasions he displayed admirable coolness under heavy fire, and succeeded in establishing his regimental aid post in the most advanced positions, where he attended the wounded of all battalions. His work throughout was of the highest order. (M.C. gazetted January 11th, 1919.)

Captain (acting Major) Clark Nicholson, M.C., R.A.M.C.(S.R.), attached 49th Field Ambulance.

For conspicuous gallantry and devotion at Neuville and Ghissignies on October 24th, 1918. Early in the morning he made his way through the counter-barrage to reconnoitre and establish relay posts, and throughout the day he worked unceasingly under fire, superintending evacuation, and at night he personally took the ambulance cars along the shelled routes, dressing the wounded himself. It was due to his unremitting exertions, great courage, and fine example that the evacuation of the wounded was successfully carried out. (M.C. gazetted January 1st, 1919.)

Temporary Lieutenant Thomas Gordon Playford, M.C., R.A.M.C., attached 1/1st (Northumbrian) Field Ambulance, R.A.M.C.(T.F.).

On November 7th, 1918, he was at St. Remy Chaussee in command of bearers. Hearing that there was a large number of wounded in an aid post, he took two ambulance cars to the place, making three journeys in all, under heavy machine-gun and shell fire, and eventually cleared some thirty wounded. On the following night he again took cars and cleared seven loads of patients. As the aid posts were only three or four hundred yards from the front line, he showed great courage and devotion to duty. (M.C. gazetted September 24th, 1918.)

Temporary Captain (acting Major) Arthur Richmond, M.C., 19th Field Ambulance, R.A.M.C.

For conspicuous gallantry and devotion to duty near St. Aubin during operations on November 7th and 8th, 1918. Hearing that another medical officer had become a casualty and that nearly seventy other casualties had occurred in the battalion, he led a party of stretcher-bearers through heavy shell fire and direct machine gun fire to succour and remove them to a place of safety. Through his indefatigable efforts all casualties were brought back. (M.C. gazetted January 1st, 1917.)

Captain (acting Major) Arthur Leonard Shearwood, M.C., R.A.M.C.(S.R.), attached 33rd Field Ambulance.

For conspicuous gallantry and initiative when in charge of the evacuation of the wounded during the operations carried out between November 3rd and 11th, 1918. During this period he worked day and night, frequently under shell fire, and by his energy and devotion to duty saved many lives. (M.C. gazetted February 15th, 1919.)

Captain George Alexander Smith, M.C., 13th Field Ambulance, C.A.M.C.

For conspicuous gallantry and devotion to duty in the operations south of Valenciennes on November 1st and 2nd, 1918. Through heavy gas-shell and machine-gun fire he supervised the clearing of the battlefield, and much of the success of the rapid evacuation of the wounded was directly due to him. He showed a total disregard of personal danger and splendid energy, and was a magnificent example to all men under him. (M.C. gazetted February 15th, 1919.)

Captain (acting Major) Robert Alexander Stark, M.C., 1/3rd (West Riding) Field Ambulance, R.A.M.C.(T.F.).

For conspicuous gallantry and devotion to duty during the fighting west of Saulzoir for the Selle River, north-east of Cambrai, between October 11th and 14th, 1918. He was charged with clearing the wounded from ground newly won, and the object of a heavy counter-attack by the enemy. As a result of his devotion and total disregard of personal risk, it was possible to clear numbers of helpless wounded from positions of great danger, and he was directly responsible for saving many lives. He set a magnificent example to all ranks with him. (M.C. gazetted September 26th, 1917.)

Captain Richard Chapman Weldon, M.C., C.A.M.C., attached 2nd Motor Brigade, C.M.G.C.

While in action at Naves, on October 10th, 1918, he had command of the regimental aid post established just west of the village. When a motor-cycle scout had his legs blown off and was wounded in the chest on the road east of Naves, he went forward under heavy fire, dressed his wounds, and had him taken back in his car, thus undoubtedly saving his life. He has consistently shown marked devotion to duty. (M.C. gazetted February 15th, 1919.)

Temporary Captain (acting Major) Ivan Stuart Wilson, M.C., 9th Field Ambulance, R.A.M.C.

For conspicuous gallantry and resource on November 4th, 5th, 6th, and 7th, 1918, between Ruesnes and La Longueville. He helped to organize the evacuation of all wounded from the divisional front. Though frequently exposed to heavy shell fire, and at times under machine-gun fire, his perseverance and initiative contributed largely to the quick evacuation of all wounded. (M.C. gazetted January 1st, 1917.)

(To be continued.)

England and Wales.

Liverpool Medical Institution.

The annual dinner of the Liverpool Medical Institution, which had not been held during the war, took place on December 13th. The president, Mr. Thelwall Thomas, was in the chair, and a large number of members of the institution and representatives of the civic life of Liverpool were present. The speeches of Lord Russell and the Vice-Chancellor of the University, Dr. Adami, bore testimony to the progress of education in the city, and especially of medical education during the last fifty years. In promoting such efforts it was said the Liverpool Medical Institution had always played a conspicuous part, and the university owed its conception to leading citizens and medical men connected with the School of Medicine. Dr. Adami expressed the hope that in the near future the Liverpool Medical Faculty, by means of a thoroughly well equipped staff of post-graduate teachers, would make Liverpool a medical Mecca, and attract medical men from the Dominions over the seas and the United States by giving opportunities for research and study. He mentioned the School of Tropical Medicine as showing that Liverpool had the material and the opportunity. Among the guests were Dr. Depage and Dr. Pechère, who took the opportunity of thanking the medical profession of Liverpool and its environs for the handsome contribution to the Belgian Doctors' and Pharmacists' Fund. Dr. Pechère assured his hearers that it would be difficult to express in words the terrible distress his colleagues had suffered from the invasion of the *barbares*. Major-General Sir Robert Jones, in proposing the health of the guests, mentioned the presence of Dr. W. T. Grenfell of Labrador, whose medical work among deep sea fishermen was so well known, and of Mr. Joseph Conrad, the greatest living artist in words.

The Mitchell Banks Memorial Lecture.

The Vice-Chancellor of the University of Liverpool, Dr. Adami, occupied the chair at the meeting to which Professor Depage delivered the lecture, a report of which is published at p. 820. After the lecture, which was given in the surgical theatre of the University, Mr. Thelwall Thomas proposed a vote of thanks to Dr. Depage and expressed the pleasure with which those present had listened to his address.

Clinical Instruction at the Maudsley Hospital, London.

A systematic course of teaching in psychiatry at Maudsley Hospital has been arranged under the direction of Sir Frederick Mott. It is designed for post-graduates who intend to specialize in mental disease, and will consist of lectures on physiology, pathology, and psychology in their application to the study of mental diseases; and clinical lectures and demonstrations. Among those who have promised to give lectures are Dr. C. H. Bond, Sir Bryan Donkin, Sir William McDougall, Dr. F. L. Golla, Dr. Bernard Hart, and Captain Mapother, R.A.M.C. The fee for the whole course is 15 guineas, for separate sectional courses 3 to 5 guineas, and for clinical instruction only 3 guineas for three months and 5 guineas for six months. Facilities are to be given to medical officers in the service of the London County Council to attend the courses, and half fees only will be charged them.

Scarlet Fever and Diphtheria in London.

In view of the somewhat alarmist statements that have lately appeared in certain lay periodicals with regard to the prevalence of scarlet fever and diphtheria in London, it may be well to give the figures of notifications and deaths during the eight weekly periods between October 11th and December 6th. The numbers of notifications are those given in the weekly extracts published by the Metropolitan Asylums Board. The numbers of deaths are those given weekly under the heading "London" in the return issued by the Registrar-General. The following figures include those given in the last published returns:

Week ending—	Notifications.		Deaths.	
	Scarlet Fever.	Diphtheria.	Scarlet Fever.	Diphtheria.
October 18th	449	249	3	15
October 25th	481	247	5	24
November 1st	444	257	—	18
November 8th	458	204	2	17
November 15th	438	236	2	24
November 22nd	467	266	2	21
November 29th	515	305	2	23
December 6th	503	269	6	28

Sydney.

Society of Returned Medical Officers of New South Wales.

A meeting of medical officers who had served abroad in the war was recently held in the British Medical Association Library. Between eighty and a hundred medical officers attended. Dr. Scot Skirving was asked to preside, and in the course of his opening remarks said that he hoped that the association which was to be formed would be not for offensive or aggressive purposes, but that the objects would include a mild form of defence for a body of men who had sacrificed much. It was eventually resolved to form an association among medical officers returned from service overseas and among medical students who had interrupted their courses and had graduated after return from active service. The association is to be called "The Society of Returned Medical Officers of New South Wales." After full discussion the following statement of the objects of the society was approved:

1. To promote social intercourse among members and to maintain service traditions and friendships.
2. To ensure assistance, as far as possible, to New South Wales medical officers disabled by their services and to the dependants of those officers who had died on service.
3. To promote the interests and to forward the welfare of members.

The entrance fee is five shillings and the annual subscription the same amount.

The following were elected office-bearers and members of the committee:

President: Major-General Sir Neville Howse, V.C., K.C.B., K.C.M.G. Vice-Presidents: Colonel Sir Alexander MacCormick, Major R. Scot Skirving, Colonel T. H. Fiaschi, D.S.O., V.D., Colonel R. E. Roth, C.M.G., D.S.O., V.D., Colonel T. Morgan Martin, C.M.G. Honorary Secretaries: Lieut.-Colonel H. R. G. Poate and Lieut.-Colonel C. E. Wassell, D.S.O. Honorary Treasurer: Major Wilfred Vickers, D.S.O. Members of Committee: Surgeon Commander H. J. D. Brennand, R.A.N., Lieut.-Colonel C. B. Blackburn, C.B.E., Lieut.-Colonel A. H. Tebbutt, D.S.O., Lieut.-Colonel C. W. Thompson, M.C., D.S.O., Major A. J. Aspinall, Major R. I. Furber, D.S.O. Country Members: Colonel J. L. Beeston, C.M.G., V.D., Major E. H. Burkitt.

Bequest to the University of Sydney.

Sir Samuel McCaughey, a wealthy grazier, who died recently in this State, left many handsome bequests to various educational and charitable institutions. He has bequeathed a sum of £465,000 to the University of Sydney and £200,000 to the University of Queensland. It is understood that this sum is to be expended not upon new buildings, but in establishing new chairs and other teaching appointments. The Senate of the University of Sydney had already decided to establish a chair of medicine, and applications are now being invited from candidates for this position. A salary of £900 a year is offered, with a right to such consulting practice as, in the opinion of the Senate, will not interfere with the due performance of the duties of the chair. The selected candidate will be an honorary physician to the Royal Prince Alfred Hospital, and he is not to be a candidate for Parliament, either State or Federal. Owing to the great increase in the number of students the accommodation in the various

class-rooms is much overtaxed, and in view of the large new endowment extra buildings are absolutely necessary in practically all the departments of the university.

THE TEACHING OF SCIENCE.

The Minister of Education recently addressed a conference convened to consider the question of stimulating the study of science. He expressed the opinion that every school should possess a laboratory and a science workroom. Although the cost might preclude this for a time, he hoped that in the early future that difficulty would be overcome. Professor T. E. David, F.R.S., emphasized the need for more room at the University for the accommodation of the students. As a great believer in open-air study he favoured the teaching of botany, zoology, and geology to all students in public schools, and particularly to those in the country districts. He also advocated the constitution of an advisory board to assist the department in its new movement for the stimulation of the study of science. Professor Carslaw, professor of mathematics in the University, referred to the difficulties under which the university authorities labour owing to lack of buildings suitable for research work. He declared that the University in this respect was quite unable to carry out its functions.

WOMEN'S COLLEGE EXTENSION.

Miss Louisa Macdonald, M.A.Lond., who has held the position of Principal of the Women's College in the University of Sydney for the past twenty-seven years, retired recently, and has left for England. To commemorate her long and valuable services at the College it has been decided to establish a fund, with the object of extending the present building. The College is now so crowded that its work is seriously hampered. The original plan of the building shows accommodation for 150 students, but only the first section, with bedroom space for 26, has been completed. Additions of a temporary nature have been made, so that 45 students can be accommodated, but with difficulty. A sum of £5 000 is asked for, and this with a Government subsidy of £5,000 will, it is thought, be sufficient to meet the present most pressing needs of the College.

India.

PASTEUR INSTITUTE OF SOUTHERN INDIA.

THE report of the director (Lieut.-Colonel J. W. Cornwall, I.M.S.) of the Pasteur Institute of Southern India, Coonoor (Madras), for the year ending February 28th, 1919, states that 2,825 Asiatics and 150 Europeans and Eurasians were treated during the year. This shows an increase of 691 among the former and a decrease of 112 among the latter. Six patients died during the course of treatment (4 from hydrophobia, 1 from cholera, and 1 from small-pox). Four died less than fifteen days from the date of the completion of treatment, and 22 fifteen or more days from the completion of treatment. The latter are classed as failures (0.74 per cent.). Including the cases which died less than fifteen days after the completion of treatment the percentage of deaths was 1.05. The bites in most cases (96.6 per cent.) were inflicted by dogs; jackals were responsible for 2.09 per cent. It is stated in the report that when a person is bitten by an unknown dog without provocation, rabies should be suspected and treatment applied for at Coonoor. In a circular giving advice with regard to the immediate treatment of a bite by a dog, the value of the early application of the actual cautery or caustic agents is insisted upon. A superficial wound without pockets can, it is said, easily be sterilized by nitric acid, hydrochloric acid, glacial acetic acid, or undiluted formalin. In a lacerated wound the whole of the exposed tissues should be destroyed by liquid caustic or the actual cautery. A punctured wound should be treated by introducing the caustic into the depths with a glass pipette. The skin should be previously greased to avoid injury to it, and the excess acid may be sucked out of the puncture after about thirty seconds. In both cases it is good surgical practice to excise the whole of the necrosed surfaces a few minutes after the acid application and to sew up the wound in the expectation of obtaining healing by first intention.

THE VICTORIA MEMORIAL SCHOLARSHIP FUND.

This fund was instituted twelve years ago for the purpose of educating and training Indian hereditary *dhais* (midwives) and supervising their work thereafter. It is affiliated with the Countess of Dufferin's fund, but possesses a separate organization and function. The report for the year 1918 indicates that the efforts of the fund are, in future, to be strictly limited to the hereditary *dhais*—teaching them better methods than this class has hitherto practised, and instructing and guiding them as regards the best means of saving the life of mothers and infants by the adoption of the most advanced practices in conducting maternity cases during and after labour. Accordingly the arrangements and resources of the association have been readjusted to the fulfilment of the following purposes—namely: (1) the employment of midwife inspectors; (2) the opening of a school for the training of health visitors and midwife supervisors; (3) the preparation and distribution of maternity packets, and *dhais* outfits for antiseptic purposes; and (4) the provision of lectures, models, illustrations, etc. Measures have also been taken to inform the public regarding the objects and importance of these proceedings. The amount of work that has already been done throughout the Indian Empire is very considerable. Twenty centres have been established and 39 local branches opened. During the year 93 *dhais* have been under instruction for periods ranging from three months to two years, and since the commencement of the undertaking 1,739 women have been taught and trained. The visits of the secretary and reports of branches give evidence of good work and promising results. Financially the fund is in a sound position. The year opened with a credit balance of Rs. 15,747-12-1 and closed with a credit balance of Rs. 33,138-4-10. The interest on investments amounted to Rs. 35,568-2-1. Altogether this report reveals a most desirable enterprise, and much enthusiasm and energy in promoting its very important objects.

THE HEALTH OF CALCUTTA.

The story of the health of Calcutta in the year 1918 is, the health officer remarks, a sad record compared with 1917. The deaths during the year numbered 31,371, compared with 21,360 in the previous year, or 35 per mille, against 23.8. The principal cause of this heavy mortality was influenza, which broke out in epidemic form in June, 1918, and again with increased virulence in September. There were large increases in the mortality from other diseases, and this was attributed to the fact that an attack of influenza lowers the resisting power of the system against other infections which may or may not be lying dormant in the system.

The death rate among females was 44.1 per mille—a figure which is stigmatized as "a standing disgrace to the city," and the health officer adds: "Whilst poverty, overcrowding, and insanitary conditions all play an important part, child marriage, the untrained *dhai* and the purdah system have much to answer for." The infantile mortality rate of the city was 203 per mille registered births. The report gives the rate in each of the various wards, the highest being returned by Jorabagan and Bura Bazar, where the mortality reached the appalling figures of 581 and 473 per mille respectively.

INDIAN MEDICAL PRACTITIONERS.

At a public meeting held recently in Calcutta resolutions were adopted protesting against unfair reference made by public men in England to Indian medical graduates, against the failure of the Government of India to take the public into its confidence in connexion with the action proposed to give effect to the recommendations of the Medical Services Committee urging the creation of a new Civil Indian Medical Service and the restriction of the Indian Medical Service to military work; against the proposal to differentiate between the pay of Indian and European members of the Indian Medical Service; and urging that permanent commissions should be immediately conferred on select persons who have served as temporary officers.

LEPERS IN INDIA.

Increased interest is being displayed by Indians in the grave problem of the treatment of lepers. At a recent public meeting at Viceregal Lodge, Simla, it was urged

that the creation of a number of agricultural and industrial leper colonies, made attractive to the unfortunate people concerned, and affording facilities for obtaining the latest scientific treatment, would have far-reaching effect in reducing the prevalence of the disease.

Correspondence.

AN APPEAL.

SIR,—The Royal Medical Benevolent Fund has hitherto been able to send a Christmas gift of £1 to those who have received grants during the year. There are 120 of these deserving people, and I shall be glad to receive contributions.—I am, etc.,

CHARTERS J. SYMONDS,
Honorary Treasurer.

11, Chandos Street, Cavendish Square, W.,
Dec. 13th.

PYLORIC ULCER.

SIR,—In the article on gastric ulcer by Sir Berkeley Moynihan, appearing in your issue of December 13th, he classifies these ulcers as either gastric or duodenal, and defines them thus:

An ulcer occurring on the proximal side of this vein is a "gastric ulcer"; an ulcer occurring ¼ in. or ½ in. or more beyond it is a "duodenal ulcer."

The vein referred to is the pyloric. He makes no mention of pyloric ulcers, by which I mean ulcers occurring over the pyloric sphincter or in close proximity to it, in the area of ¼ in. or ½ in. referred to in the quotation as dividing gastric from duodenal ulcers. In this classification he is, I think, supported by the majority of writers and textbooks. Personally I have observed, when operating for perforation, a considerable and increasing number of cases during the past eight or nine years, in which the ulcer was in the pyloric region, frequently being situated exactly over and involving the sphincter, and I would suggest that pyloric ulcer is of sufficiently frequent occurrence to deserve inclusion in our classifications.

The position of these ulcers has a distinct bearing on treatment, as, if merely stitched, pyloric stenosis is likely to follow. I have been in the habit, where the patient was not critically ill, of excising the ulcer by means of an oval longitudinal incision, and then performing pyloroplasty by changing the axis of the incision from the horizontal to the vertical, in the usual manner. The operation is only lengthened by some five minutes, and the patient recovers with an efficient pylorus.

Another point which might with advantage be emphasized is the entire absence of any history of previous gastric disturbance or pain in a large number of cases of perforating pyloric ulcers. Many patients have assured me, when questioned during convalescence, that they never had any trouble with the stomach; that they never had pain, but were vigorous and successful eaters until seized with violent pain and collapse at the time of perforation. The same is true of some perforating duodenal ulcers.—I am, etc.,

Glasgow, Dec. 15th. JOHN A. C. MACEWEN.

HYPERPYREXIAL HEAT-STROKE.

SIR,—Regarding Captain Sinderson's letter (BRITISH MEDICAL JOURNAL, November 29th) I would point out that the ship referred to in my letter (BRITISH MEDICAL JOURNAL, August 9th) during her voyage from England to the Persian Gulf called at Capetown and Durban only, and, as these two stoppages were made in the (Southern) midwinter—July 16th to 18th and 21st to 30th respectively—it would be impossible for the ship's cargo and stores to have been infected with sandflies while in these ports. I doubt if sandflies exist at Capetown or Durban even in midsummer.

The extensive outbreak of heat-stroke that occurred at the termination of this voyage affords clear and conclusive proof that this disease is not simply an exaggerated form of sandfly fever.—I am, etc.,

Hull, Dec. 13th K. G. HEARNE.

PREVENTION OF VENEREAL DISEASE.

SIR,—Our letter, published on December 6th, was designed to point out that any society which appeals to the public as audience and for support has a very serious duty to perform in the way of supplying that public with full and basal facts. We complained because the Society for the Prevention of Venereal Disease was failing to bring forward even such an essential fact as that in women (who, after all, are a fair proportion of the population), owing to their physical conformation and the size of the area requiring treatment, self-disinfection is and must remain absolutely unsatisfactory.

Dr. Magian in his letter now admits this to be the case. Would it not have been fairer to the public to state these limitations when saying that "such diseases are very easily prevented"? Another fact which is owing to the public is the following:

That from 1870 to 1913, under pre-war conditions and with no systems of prophylaxis or self-disinfection, the army figures for venereal disease show a steady drop from 201 per 1,000 to 50.9; and, indeed, in 1916, were as low as 38 per 1,000. Prophylactic measures were introduced that year, but were not widely taken up until the middle of 1918. In May, 1919, the venereal disease rate was 39 per 1,000, showing that in spite of the efforts made in the direction of disinfection there was no fall in the venereal disease incidence in the home army, although under military encouragement such disinfection is more easy to carry out than it would be in the case of the civil population.

We argue:

1. That inasmuch as self-disinfection, even under army discipline and supervision, has not apparently succeeded in reducing the percentage of infection, what promise can be made that the method would succeed when handed out broadcast to an unsupervised public?
2. That since—as shown in the army—venereal disease is capable of being markedly diminished by introducing wider human interests, recreations, etc., why not push these successful methods further amongst the general public rather than resort to plans that are open to many objections?

We dread the psychological and social effect on young men and women, and even on girls and boys, during the impressionable time of youth, of any printed matter suggesting that fornication is condoned by responsible persons either lay or medical. For fornication (even camouflaged under the more graceful title of sexual irregularity) is antisocial. It tends to prevent the normal formation of homes, and tends to break up homes when these exist, and finally, it is, of course, the main cause of venereal disease.

According to Dr. Magian's letter the policy of his society is wholly based on the assumption that the normal man is, and will be, immoral—and that therefore you are not weakening his morale by handing him pamphlets on the technique of the safe (so-called) indulgence in sex licence. Once more, what are the facts? Our male population, in the experience of every one at all acquainted with these matters, can be grouped as follows:

(*a*) Those who decline to be immoral.
(*b*) Those who go wrong sexually almost from the first.
(*c*) Those who are easily swayed one way or the other by public opinion and by example.

The Society for the Prevention of Venereal Disease ignores the claims of the whole of this last large class, and, indeed, would, by its propaganda and its condonement of moral obliquity, sway them to join that group whose sexual instincts are so abnormally strong as to be uncontrollable by the restraints which public opinion and moral and social guidance could and might provide.

Since it is now an accepted medical dictum that the sowing of "wild oats" is not needful to health, surely we doctors shall be serving our country better by promulgating this truth, which leads to self-control, vigour of life, and honest healthy parenthood, rather than by lending our names to such schemes as tend to over-development of the sex appetite, which—as is well known—becomes more dominant by indulgence.—We are, etc.,

MARY D. STURGE,
Birmingham, Dec. 14th. ROSE LYNCH MOLLOY (Mrs.).

SIR,—In your issue of December 6th is a letter under the above heading from Drs. Mary D. Sturge and Rose Lynch Molloy of Birmingham, expressing their extreme amazement (repeatedly) at the letter of the Executive Committee

of the Society for the Prevention of Venereal Disease in your issue of November 29th.

I wonder what their experience is. Here is mine. I have preached and provided prophylaxis for thousands of men for the past twelve years—in fact, since Metchnikoff's articles on the subject, and as a result of my experience I am tempted to lay down the following axioms:

1. I have never known a case of venereal disease follow prophylaxis properly applied. (I except chancres on the scrotum, abdomen, lip, and other places not usually protected.) This is supported by other medical officers of wide experience.
2. Unless carefully taught prophylaxis is more or less useless, hence its frequent failures.
3. Immediate self-disinfection, although desirable, is not absolutely necessary. Metchnikoff himself gave eighteen hours as the limit of safety. I advise as soon after risk as possible, but up to twelve hours with every prospect of success. Even if drunk at the time of risk, or "under out-of-door conditions" (I quote your correspondent's letter), there is no excuse for not using prophylaxis when sober, under the former conditions, or subsequently under the latter.

The failures in the army cause me no surprise. There are plenty in the navy. The medical officers in both services have during the war largely been drawn from civil life. Among them are certainly many who, like your correspondents, have little faith from lack of experience, others who consider the "punishment fits the crime," others who have conscientious objections to lecturing on the subject, and still others too tired to do so. It is such as they who damn what I and others consider the incalculable and almost certain benefit of prophylaxis.

I am referring solely to the nargol (silver nucleinate) and mercury ointment prophylaxis; I have as yet had little experience of the more recent prophylactic outfit of mercury ointment only. Also I have no experience of prophylaxis in women, but the elimination of venereal disease in men (which I believe is possible with an infinity of trouble) would gradually lead to its elimination in women. A Utopian dream, perhaps, but not impossible if all had the same faith gathered from experience.

Thank Heaven prophylaxis is coming into the light of day. For years such as I have worked by stealth. Now it is supported by "eminent men" publicly. I am not eminent, and only the indignation aroused by such a letter as your correspondents' (founded, as I believe, on inexperience) causes me to seek the hospitality of your columns.—I am, etc.,

December 9th. SURGEON COMMANDER R.N.

DEMENTIA PRAECOX.

SIR,—The leading article on dementia praecox in the JOURNAL of December 6th, emphasizing the importance of Sir F. W. Mott's study of the subject, has some suggestive points; for instance, that patients after exhibiting profound dementia for years, eventually recover. In such cases it cannot have been the nerve centre that had been at fault, but something acting upon the nerve centre, from the periphery—in other words, it was not an *organic* but a *functional* disease. We know that over-stimulation of a nerve causes paralysis, and we know how intimately all our organs are connected through the nervous system, so that we need not wonder that over-stimulation of the sexual organs gives rise to mental symptoms at puberty, by reflex action, or that the change of life, as it is called, both in men and women, is attended with such symptoms.

It is the same with regard to the digestive organs. Over-stimulation with one kind of food gives rise to Bright's disease, with another to diabetes, through reflex action also; but when any disease, either of the digestive organs or of the central nervous system, comes on, it is a sign that the way in which the patient had been living was at fault, and until that is put right the symptoms will persist, and a mere functional affection may in time become organic. Hysterical affections tend to become organic if proper treatment is not carried out, and hysteria is seldom met with in those who lead an active out-of-door life; hence the importance of outside work in the treatment of all nervous affections. Whatever the symptoms may be—and in what is called neurasthenia they are legion—outside work will remove them. Work is so beneficial in nervous affections because it excites *interest*, which to the mind is like hunger to the body. Asylum statistics have improved since the inmates were made to work; and, if my theory that food is the chief cause of disease is correct, with work outside and a proper dietary our asylums might soon be emptied. The late Dr. Mercier's long list of cases with symptoms of insanity which got well by a mere change of diet confirms that view; hence the importance of the study of dietetics in the treatment of mental as well as bodily disease.—I am, etc.,

Denholm, Hawick, Dec. 9th. JOHN HADDON, M.D.

EXPERIMENTS ON THE DESTRUCTION OF NITS AND LICE.

SIR,—In the issue for November 29th of your ably conducted JOURNAL there are three papers which I believe together throw important light upon this perennial topic for investigation and discussion: (1) Sir F. W. Mott's paper, wherein he shows the importance of the adrenal cortex as a storage for lipoid elements; (2) experiments by Messrs. Bacot and Lloyd (Captain R.A.M.C.T.) on various methods for destroying the parasites in clothing and elsewhere; (3) a paragraph in the EPITOME which quotes G. Bergmark as stating that benzene is very poisonous. This latter statement I can fully believe.

When a student at Cambridge and whilst a dresser to Sir George Murray Humphry I belonged to an entomological society. The members at the week's end frequently walked to the woods on the Gog-Magog hills and netted butterflies and other insects, which were duly added to our collection. Now and then it happened that a valuable specimen went wrong. Damp would make it mouldy, or mites ("wingless flies," as the vice-chancellor informed me that they ought to be named) laid their eggs in it. One of our members—I think it was Davies-Colley, subsequently on the staff of Guy's—told me that for the removal of all such evils "butterfly flesh is heir to" there was nothing like benzene. When a drop or two of the liquid is placed on a moth, for instance, either living or dead, it immediately becomes semitranslucent and if alive succumbs at once. Now this sudden demise proves the poisonous qualities of the liquid. It also throws a sidelight upon the way the poison acts. Benzene has a great partiality for fat. That important element is at once attacked. No animals can survive if we put their lipoids out of action. The translucent tissues are the result. So soon as the benzene has evaporated the insect resumes its normal appearance.

At the risk of being prolix (many elderly people become so without knowing it) I shall now venture to describe a personal experience of its value; it happened once or twice whilst dressing the out-patients. At the time I recall there was an epidemic among the country folk of a disease, named by them "Scotch fiddle." In my youthful zeal as a skin healer—'twas before antiseptics were introduced—I caught the contagion on more than one occasion; also as I was a member of a musical society and the owner of a very valuable Amati 'cello, I did not wish to infect the bass viol; nor did I wish any member of the orchestra to say aloud: "Thoo 't Scotch fiddle atween thi fingers, mon." So I bethought me of benzene and its "happy despatch" of little bugs. I smeared a little benzene "atween my fingers"; the result was excellent. One application cured the incipient disease. The nits and lice exposed to its action would undoubtedly share the fate of other living creatures.—I am, etc.,

Hove, Dec. 2nd. W. AINSLIE HOLLIS.

THE SAFETY OF ETHYL CHLORIDE.

SIR,—My previous letter was simply a statement of my own experience, and I must plead guilty to not having looked up the literature of the subject, but I do not believe that the statistics quoted by Dr. Dudley Buxton give a correct estimate of the mortality from ethyl chloride. Dr. McCardie himself agrees that they require revision.

Since 1905 ethyl chloride has been used over 27,000 times at the Birmingham Ear and Throat Hospital; 6,225 times in six years at the Throat Clinic; and 6,789 times in two and a half years at one of the school dental clinics—40,000 cases of which I have actual knowledge without a death. It has also been used extensively at the Birmingham Dental Hospital, and there are five other school dental clinics from which I have not the figures. These taken with the other hospitals would add a large number to the administrations in Birmingham during the last fifteen years.

H.M. Coroner for the City has very kindly gone through his records with me. There was one death from ethyl chloride in 1904; the patient was a man of 67 suffering from chronic Bright's disease, emphysema, etc. There was another death in 1912, in which case ethyl chloride was followed by ether for the operation of incising a mammary abscess. A case in which it was followed by C_2E_3 cannot, I think, fairly be counted.

I think these figures are large enough to prove that ethyl chloride, in the limited class of cases for which it is suitable, is a very safe anaesthetic. I do not of course advocate its indiscriminate use; as to experience, this can only come from use.—I am, etc.,

Birmingham, Dec. 8th. C. B. DALE.

THE R.A.M.C. AS A CAREER.

SIR,—The letter in your issue of November 22nd from "W. M. S." of Cardiff, in which he uses expressions like "the great Whitehall red-tape machine," "soulless machine," "burden of honours," "ineptitude of officials," indicates surely that "W. M. S." is indulging himself in a "grouse" against the medical organization for war, and that he is nursing a grievance—possibly imaginary—against someone in authority whom he has run up against. If this is so, as "W. M. S." takes it upon himself to give counsel to would-be entrants to the R.A.M.C., it will be seen that his advice may not altogether be free from prejudice.

"W. M. S." would do well to remember that most of those who are not in the R.A.M.C. are about to become to a much greater degree subject to the regulations of a Government department—witness the recent "instructions" from the Ministry of Health.

As we cannot all become consulting physicians, most of us will soon be subject to regulations which—together with night calls, midwifery, evening work, on duty day and night, Sundays not excepted, and such-like trifles—may make us sorry that we did not elect to go into the R.A.M.C. as a career.

As to his expression "part doctor, part soldier, but chiefly clerk," it is to be hoped that "W. M. S." keeps a few records.

As to doing good work in the services, the large number of distinguished investigators who have adorned these is ample evidence that good work can be done there as elsewhere.—I am, etc.,

December 7th. ONE WHO HAS TRIED BOTH.

THE APHORISMS OF JOHANNES DAMASCENUS.

SIR,—As I am engaged in editing a seventeenth century Irish version of the Aphorisms of Johannes Damascenus, I should be greatly indebted to any reader of the BRITISH MEDICAL JOURNAL who can give me information concerning the identity of this medical writer. According to Lindenius, he was a Benedictine monk who flourished *circa* 791 A.D. The *Catholic Cyclopaedia* gives his obit as 875 A.D., while another authority states that he flourished *circa* 1158 A.D. What are the accurate biographical facts? The Aphorisms are said to have been published in 1497 at Venice (with the works of Rhazes); in 1489 at Boulogne (in folio); and at Basle (*apud* Henricum Petri) in 1579 (in octavo). The loan for a few days of a copy of any printed edition would greatly expedite my task as editor, as it would enable me to fill some lacunae in the MS., which is much worn; or, if the volume is too precious to entrust to the post, I would forward my typed transcript of the Latin to any correspondent who would be kind enough to compare it with the printed copy.—I am, etc.,

(Rev.) F. W. O'CONNELL, D.Litt.

Queen's University, Belfast, Nov. 30th.

THE GENERAL MEDICAL COUNCIL ELECTION—ENGLAND AND WALES.

SIR,—Will you allow me to express my sincere thanks to the 1,636 doctors who voted for me? The result far exceeded my expectations. I had no committee, nor funds to circularize all the electors.—I am, etc.,

Blackpool, Dec. 14th. JNO. BROWN, M.D.

Medico-Legal.

RITTER *v.* GODFREY.

JUDGEMENT was given, on December 11th, in the Court of Appeal, on an appeal by Dr. T. H. Godfrey, of Finchley, from a judgement of Mr. Justice McCardie. It may be remembered that in May last an action was tried by Mr. Justice McCardie, sitting without a jury, in which a Mr. Ritter and his wife sought to recover damages against Dr. Godfrey in respect of the alleged negligent conduct of the latter in his attendance upon Mrs. Ritter during her confinement, whereby the child was born dead. After the birth the doctor had been dismissed from further attendance on the case, and correspondence had taken place between Mr. Ritter and the doctor upon the way in which he had treated Mrs. Ritter.

Mr. Justice McCardie found that there was no evidence of negligence on the part of Dr. Godfrey, and gave judgement for him, but reserved the question of costs for further consideration. On further consideration, on June 2nd, the judge, after hearing argument, said that he felt that the correspondence from the doctor's side was unsatisfactory, that one letter in particular was regrettable, and certain paragraphs of it unjustifiable. Having regard to all the facts of the case, he felt it to be his duty to deprive the doctor of his costs. From this order Dr. Godfrey appealed to the Court of Appeal, and conducted his case in person.

The Court of Appeal, composed of the Master of the Rolls (Lord Sterndale), Lord Justice Atkin, and Mr. Justice Eve, after reserving judgement, granted the appeal with costs, and in giving judgement the Master of the Rolls said that the real ground on which Mr. Justice McCardie had deprived the doctor of his costs was the attitude the doctor had taken up in the correspondence with Mr. Ritter before the latter brought his action. He pointed out that in an action tried without a jury the successful party has technically no right to his costs in the absence of an order by the judge granting him his costs, but that in practice a successful party in an action tried by a judge alone was always given his costs unless in the exercise of his judicial discretion the judge considered that there were grounds for depriving him of the costs to which he was otherwise as a matter of regular practice entitled. One ground on which a successful defendant might be deprived of his costs was where he had been guilty of conduct which had encouraged the plaintiff to believe that he had a good case, and it had been argued by counsel for the respondent that the spirit of levity in the doctor's letters after the confinement was such as reasonably to induce Mr. Ritter to believe that the doctor had been negligent in his attendance on Mrs. Ritter. Whilst he accepted the principle of law, he had grave doubts as to whether this inference could be drawn from the correspondence in question; and as his colleagues Lord Justice Atkin and Mr. Justice Eve were clear in their opinion that the letters were not open to this construction, the appeal would be allowed with costs.

LUNATICS IN WORKHOUSES.

A CORRESPONDENT raises a question as to the position under the Lunacy Act, 1890, of persons who are received into workhouses under Section 20 of that Act. The section is as follows:

> If a constable, relieving officer, or overseer is satisfied that it is necessary for the public safety or the welfare of an alleged lunatic with regard to whom it is his duty to take any proceedings under this Act, that the alleged lunatic should, before any such proceedings can be taken, be placed under care and control, the constable, relieving officer, or overseer may remove the alleged lunatic to the workhouse of the union in which the alleged lunatic is, and the master of the workhouse shall, unless there be no proper accommodation in the workhouse for the alleged lunatic, receive and relieve and detain the alleged lunatic therein; but no person shall be so detained for more than three days, and before the expiration of that time the constable, relieving officer, or overseer shall take such proceedings with regard to the alleged lunatic as are required by this Act.

It will be observed that the power conferred by this section is designed to meet cases of emergency, and in those cases the detention actually precedes both the medical examination and the proceedings before the magistrate.

The section therefore limits the time during which the alleged lunatic may be detained in this way to a period of three days, and during this time the official responsible for the removal of the alleged lunatic into the workhouse

must take the necessary steps to obtain a reception order in the usual way. In other words, he must convert the "alleged lunatic" into a "lunatic."

In these proceedings the justice may, if satisfied that the case is one for reception in a workhouse and that the workhouse is provided with proper accommodation for the reception of the lunatic, order the lunatic to be received into the workhouse as a lunatic.

If, however, for any reason the official who brought the alleged lunatic to the workhouse omits to carry out his duty to obtain a reception order within the three days so that there is a danger of a man, who in fact ought to be under restraint, being able to get out free of control, it is open to the medical officer of the workhouse, under Section 24 of the Act, to issue a certificate:

1. That the man is a lunatic, giving the grounds for his opinion.
2. That he is a proper person to be allowed to remain in a workhouse as a lunatic; and
3. That the accommodation at the workhouse is sufficient for his proper care and treatment, and having regard to the presence of other inmates in the workhouse.

On this certificate the lunatic may be detained for a further period of fourteen days, at the end of which time, unless a reception order has been made in the interval in the ordinary way, he must be released.

PROSECUTION FOR FAILURE TO PROVIDE SPECTACLES.

IN the *Bootle Times* for November 14th, 1919, an account is given of the prosecution of a parent for neglect to provide spectacles necessary for his child. The prosecution was undertaken by the National Society for the Prevention of Cruelty to Children. It was stated that the child's eyes had been found to be defective on medical examination, the parent had been urged to provide glasses, but had declined to do so. It was for the court to decide whether the child should have glasses or not. Dr. R. E. Harcourt said he had examined the child and found it short-sighted. Glasses were ordered, but were not provided. The neglect had undoubtedly caused the child suffering. She would be unable to see the blackboard without straining her eyes, and in trying to do so might suffer from headaches and pain in the eyes. Defendant said that the child's eyes were as good as his own. Defendant was fined 40s., and directed to pay the costs of the society and of the summons.

The primitive objection to the use of glasses by children dies hard, probably by reason of the dislike on the part of parents to be told that their children are not such perfect products as they would wish to believe. But the necessity for prosecution to convince refractory parents that their neglect means a real injury in prospect to the child is getting rarer as the benefit to the child of comfortable eyes, even though with glasses, is appreciated.

Universities and Colleges.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary council was held on December 11th, when Sir George Makins, President, was in the chair.

Primary Fellowship.—At the recent examination in Anatomy and Physiology 141 candidates were examined; of these, 53 were admitted under the special war conditions, and of them 37 were successful; 88 were admitted under the ordinary conditions, and of these 30 were successful. It was decided that a special examination be held in November, 1920, in addition to the special examination to be held in May, 1920.

Diploma of Fellow.—The diplomas of Fellow were conferred upon the following candidates who were successful at the recent final examination:

A. W. Adams, G. V. W. Anderson, Margaret M. Basden, Rustam Nusserwanji Cooper, A. G. T. Fisher, M.C., W. A. Hailes, R. T. Jones, T. Julian, R. Kennon, F. B. McCarter, F. A. Maguire, E. T. C. Milligan, C. M. Ockwell, M. H. Oldershaw, A. B. P. Smith, W. A. Pocock, A. Radford, Tribhovandas Oghaddar Shah, S. C. Shaw, Raghunath Dadoba Shirwalkar, A. J. Trinca.

Diploma of Member.—The diplomas of member were conferred upon the following, who have now complied with the by-laws:

G. Perkins, H. H. Perry.

Dental Surgery.—At the recent examination 44 candidates qualified for the Licence in Dental Surgery.

Court of Examiners.—Mr. H. S. Pendlebury was elected a member of the Court of Examiners, and Mr. John Murray a member of the Board of Examiners in Dental Surgery.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

AT the annual meeting of the Royal College of Physicians of Edinburgh, on November 27th, the following officers were elected: *President*, Sir Robert Philip; *Vice-President*, Dr. A. H. Freeland Barbour; *Treasurer*, Dr. Norman Walker; *Secretary and Registrar*, Dr. J. S. Fowler; *Librarian*, Dr. D. Berry Hart; *Curator of Research Laboratory*. Dr. J. J. Graham Brown; *Members of Council*, Dr. F. D. Boyd, Dr. G. M. Robertson, Dr. Robert Thin, Dr. Lamond Lackie, Dr. Harry Rainy.

Dr. Jonathan Campbell Meakins has been admitted to Membership of the College.

The following distinguished and representative men, having accepted the offer of honorary fellowship, have been unanimously elected honorary Fellows of the College: Professor Hermann M. Biggs, M.D., M. Georges Clemenceau, Professor Kitasato.

Obituary.

WE have to record with regret the death, on November 28th, of Dr. ROBERT MCKELVIE, of Brundall, Norfolk, at the age of 78. He was born in Whithorn, Wigtonshire, and graduated M.D.Edinburgh in 1865. He first settled in Cromer, where he became surgeon to the cottage hospital. After leaving Cromer he went first to London and then to Scotland. He finally settled at Brundall, where he won many friends. Dr. Michael Beverley, in a tribute to the memory of Dr. McKelvie, says: "He was brought up in the old school of medicine, and was wedded to much of its style and methods, but kept himself well up to date. He was a keen reader of recent medical publications and journals, and followed with great interest the fresh developments of medical science. Although greatly inclined to give free play to the *vis medicatrix naturae*, he was a great believer in the efficacy of drugs, and his patients, especially the poor, never suffered for the want of them. In consultation with his professional brethren, whilst holding with characteristic tenacity to his own opinion, he was always open to conviction. In the days of long ago, when I so frequently met him in consultation in the cottage homes of the Cromer and Sheringham fishermen, I was struck with the confidence they reposed in his judgement and the friendship between them. This applied equally to his more wealthy patients. He had an extensive practice amongst all classes, and his departure from Cromer was much regretted. Although coming to Blofield and Brundall comparatively late in life, Dr. McKelvie soon secured the confidence of a new clientèle of patients, and the estimation of a large circle of friends."

THE death took place recently, at Coventry, of Dr. ARTHUR ORTON, at the age of 71. He was the third son of John Orton, M.R.C.S. All three sons became doctors, and continued their father's practice at Bedsworth, near Foleshill, Coventry. Dr. Arthur Orton and his brothers represented the sixth generation of medical practitioners, the family having been established in practice at Earl Shilton, Leicestershire, until the death of Arthur Orton's grandfather, John Orton, who was killed by a fall from his horse. The practice was then sold, and Arthur Orton went to Australia about twenty-six years ago, and began medical work at Stanthorpe, Queensland. He acquired there a large practice over a wide area, visiting on horseback small isolated towns at regular intervals. He became a justice of the peace, and amassed a competency, which enabled him to return to this country several years ago; unfortunately his health failed soon after his return. Dr. Orton leaves six nephews in the medical profession, including Dr. L. E. Orton, of Bedsworth, and Dr. John Orton, chairman of the Coventry Division of the British Medical Association. He obtained the L.S.A. diploma in 1880, and the M.R.C.S. two years later.

LIEUT.-COLONEL ROBERT WILSON, C.A.M.C., died recently at Toronto at the age of 53, after undergoing an operation on the previous day. After graduating M.D. at McGill University, Montreal, he commenced practice in Point St. Charles, and was for some years superintendent of the Western Hospital, Montreal. He was greatly interested in x-ray work, and built the first static x-ray machine used in Montreal. He came overseas with the first Canadian contingent, and was attached to the 1st Canadian General Hospital in France; later he was attached to the Granville Canadian Special Hospital at Ramsgate, and was subsequently transferred to London, and given charge of the x-ray work and equipment in all the Canadian hospitals overseas. When this work had been thoroughly organized he was ordered back to Canada, where he was appointed consulting surgeon in electro-hydrotherapy to the Canadian military hospitals.

CAPTAIN H. J. ANDREWS is reported in a casualty list published on November 24th to have been killed in action. He took a temporary commission as lieutenant in the I.M.S. on June 30th, 1917, and was promoted to captain on completion of one year's service. He received the M.B.E. on June 3rd, 1918.

CAPTAIN GEORGE HENDERSON BAIRD, R.A.M.C., died at Sandymount, Dublin, on November 9th. He was the son of the late James Baird, C.E., of Usher's Island, Dublin, and was educated at the Carmichael College, Dublin, and at St. Mary's Hospital, taking the L.S.A. in 1892 and the M.D.Brussels in 1898. After acting as resident assistant at the Jervis Street Hospital, Dublin, he went into practice at Woolwich, where he held the appointments of medical officer to H.M.S. *Monarch* and the Cable Department, Woolwich, to the Post Office and to the Linen and Woollen Drapers' Institute. He took a temporary commission as lieutenant in the R.A.M.C. on August 10th, 1916, and was promoted to captain after a year's service.

Medical News.

MR. A. A. LIPSCOMB, on retiring from practice after nearly thirty years' work in the Wrotham District of Kent, was presented by his patients and friends with an illuminated address and a very handsome cheque.

THE Great Priory of the Order of the Temple of England and Wales has contributed £1,657 13s. 8d. to the fund for reinstating and endowing the British Ophthalmic Hospital at Jerusalem, destroyed by the Turks when they evacuated the city.

MR. H. C. NANCE, F.R.C.S.Eng., was presented with a gold watch, a chiming clock, and a gold and pearl scarf pin on his retirement from practice in Norwich from "a few of his grateful patients." He also received a silver centrepiece from his late partners, Messrs. Hugh Whitwell and Bernard B. Riviere.

AT a general meeting of the local medical profession held at Limerick, on October 23rd, it was unanimously resolved that the scale of fees for life assurance should be as follows: Up to and including £500, a guinea; above £500 and less than £1,000, a guinea and a half; £1,000 or any higher sum, two guineas. This scale to take effect on and after January 1st, 1920.

A PAPER dealing with the recent experimental researches on alcohol and alcoholic intoxication will be read by Dr. Edward Mellanby at a meeting of the Society for the Study of Inebriety at the house of the Medical Society of London on Tuesday, January 13th, at 4 p.m.

A COURSE of lectures on mental deficiency and the care of defectives for health visitors and teachers has been arranged by the Central Association for the Care of the Mentally Defective (Queen Anne's Chambers, Tothill Street, S.W.1). The lectures will be given at the Fabian Hall, Westminster, during January, February, and March. The lectures will be given by Dr. Letitia Fairfield, Mr. Kenneth Richmond, and Miss Lucy Fildes, a research student at the Psychological Laboratory, Cambridge.

A SUCCESSFUL and largely-attended festival dinner was held at the Connaught Rooms, London, on December 12th, in aid of the progress fund of the Great Northern Central Hospital. The chair was taken by the President, H.R.H. the Prince of Wales, who was supported by many distinguished guests and friends of the institution, including (besides the speakers) the Duke of Argyll, the Duke and Duchess of Somerset, the Marquess of Dufferin, the President of the Royal College of Surgeons, the President of the Royal Academy, Lieut.-General Sir Arthur Sloggett, and Mr. G. Lawson Johnston. The toast of "The Imperial Forces" was proposed by Sir James Crichton-Browne, and supported by Mr. Horatio Bottomley, M.P., who each took the opportunity of saying something in support of the hospital's appeal, while Admiral Sir Doveton Sturdee and General Lord Rawlinson, in replying, paid tributes to the work of the medical profession with the armed forces. The toast of "The Great Northern Hospital Progress Fund" was given by the Chairman, who showed interest in the work of the institution and knowledge of its needs. Lord Northampton, chairman of the hospital, and the Right Hon. H. J. Tennant, vice-chairman, responded. After "The Health of the Prince of Wales" had been honoured with enthusiasm, on the proposal of Lord Northampton and Lord Camden, and acknowledged with modesty by the Prince, Mr. Gilbert Panter, the secretary, read out the list of donations promised that evening, amounting to some £25,000.

WE are informed that under the auspices of Johannesburg University College the new building for the University of South Africa Medical School has been commenced. It is situated close to the Johannesburg Hospital and to the South African Institute for Medical Research, with which institutions its work will be intimately associated. The departments of anatomy and physiology are already working, and it is expected that the present first-year students—twenty-five in number—will be able to complete their education in Johannesburg and graduate M.B., B.Ch. in the University of South Africa. The curriculum is the result of much painstaking work on the part of the leading medical men of the city, who have co-operated with the staff of the University College. It occupies six years, and meets the requirements of the local medical councils, and, being modelled on the curricula of the English and Scottish universities, it is hoped that the General Medical Council will in due course recognize the South African medical degree.

THE discussion on some aspects of the tuberculosis problem in life assurance, opened at the meeting of the Assurance Medical Society on November 5th by Dr. Otto May (BRITISH MEDICAL JOURNAL, November 8th, p. 597), will be resumed at the house of the Medical Society of London on Wednesday, January 7th, at 5.30 p.m. A special meeting of the society will be held half an hour earlier to consider the question of incorporation with the Royal Society of Medicine. If the proposal is accepted the society will become a section of the Royal Society of Medicine, and the reports of papers and discussions would appear in the *Proceedings* of the Royal Society of Medicine, and members of the Assurance Medical Society would receive the proceedings of the section as they appeared from time to time.

THE arrangements of the Royal Institution of Great Britain for the period before Easter include a course of three lectures by Professor G. Elliot Smith, F.R.S., on the evolution of man and the early history of civilization. The first, on January 27th, will deal with man's origin; the second, on February 3rd, with elephants and ethnologists; and the third, on February 10th, with the search for gold. In March Professor Arthur Keith, F.R.S., will give a course of four lectures on British ethnology and the invaders of England. The Friday evening discourses will be given this session at 9 p.m., the first, by Sir James Dewar on low temperature studies, on January 16th. Among other evening discourses is one on the volume of the blood and its significance, by Professor W. M. Baylis, F.R.S., which will be given on February 13th.

ON December 12th, in the physiotherapy department of St. Thomas's Hospital, a demonstration was given of the methods employed in training wearers of artificial limbs in the use of them, so that they may reap the greatest possible advantage from their prostheses and walk with the best obtainable gait. Miss Randell, the sister in charge, who is to be warmly congratulated on the excellence of the training, demonstrated to a number of interested visitors what surprising feats may be performed by a one-legged man even when blindfold. This blindfolding is more than an exhibition trick. By its adoption in training, the patient is led to develop, so to speak, a muscular sense, or, at least, a consciousness of the situation of his artificial foot and leg, much sooner than he would by the ordinary daily use of the limb. The demonstration concerned an officer with a short thigh stump, who, besides going through the special exercises, climbed a ladder, skipped, and walked along a narrow beam. It must, however, be admitted that when not using a stick he walked with a very notable limp, so that in his case the subsidiary object of the training, which we understand to be the concealment of mutilation, had not been perfectly attained.

A COMPANY has been formed for the purpose of continuing the *Review of the Foreign Press*, which was, during the war, published under the auspices of the Government, and appeared to meet a want felt for some time in political, financial, and commercial circles. The paper will be edited and managed by Captain W. E. Barber (who edited it for the War Office) with the assistance of many of the former staff, and under the general guidance of an editorial advisory council. Two publications will in future be issued weekly—the *Economic Review* and the *Political Review*.

THE boats of the Royal Mail Steam Packet Company will next month resume regular calls at Madeira and St. Vincent, Cape Verd.

Letters, Notes, and Answers.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C.2, on receipt of proof.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL.

THE postal address of the BRITISH MEDICAL ASSOCIATION and BRITISH MEDICAL JOURNAL is 429, Strand, London, W.C.2. The telegraphic addresses are:

1. EDITOR of the BRITISH MEDICAL JOURNAL, *Aitiology, Westrand, London;* telephone, 2631, Gerrard.
2. FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate, Westrand, London;* telephone, 2630, Gerrard.
3. MEDICAL SECRETARY, *Medisecra, Westrand, London;* telephone, 2634, Gerrard. The address of the Irish Office of the British Medical Association is 16, South Frederick Street, Dublin.

QUERIES AND ANSWERS.

INCOME TAX.

F. L. O. joined a practitioner in partnership in October, 1919. The surveyor refuses to admit any claim to an adjustment of the existing assessment on the ground that from that date two surgeries are maintained for the purposes of the practice instead of one. Is this correct?

*** Yes; but our correspondent has a right to have the assessment of the profits of the practice adjusted at the end of the year, if the result of the additional professional expenditure now incurred is to reduce the earnings of the practice to an amount less than the assessment (Income Tax Act, 1918, Schedule D, Cases I and II, Rule 11). The existing assessment is presumably based on the average profits of the years 1916, 1917, and 1918, and it should be borne in mind that the receipts will apparently increase as a result of F. L. O.'s work, so that the earnings of the practice for the six months to March 31st, 1920, may very well exceed one-half of the previous average in spite of the additional expenditure incurred.

TESTING COLOUR VISION.

J. A. M.—The method now employed by the Admiralty in testing candidates for the navy is that advocated and arranged by Dr. Edridge-Green—a lantern in which various colours—violet, blue, green, orange, and red—can be exposed to view under conditions that imitate those under which signal lights will be seen at sea. The depth of the colours may be varied, fog and rain effects may be superposed, and the size of the light may be diminished to represent a light at different distances. The lantern is of simple construction and quite easy to work. It can be obtained from any good instrument maker—for example, John Weiss and Son, Oxford Street. The essential difference between this test and such a test as the Holmgren does not lie so much in the manner of the exhibition of the colours as in the manner of the response of the candidate. He is required to name the colour shown to him. Only one colour is shown at a time, so there is no possibility of comparison; the colour has to be judged and named from its quality alone. The test is severe, but it corresponds with the conditions of practical life. Objection has been raised to the possible inability of candidates to name a colour correctly seen. The objection is academic rather than real, and in any case a candidate who did not know the common colour names of red and green would be an unsuitable person for any position of responsibilty. Even the South Sea Islanders are recorded to have distinguished between "blood" colour and "sea" colour.

LETTERS, NOTES, ETC.

ANONYMOUS COMMUNICATIONS.

IT appears to be necessary to remind correspondents that no notice can be taken of anonymous communications unverified by the author's name. The writer must furnish his name to the editor, though not necessarily for publication.

AN IMBECILE'S MEMORY.

DR. CLAUDE A. P. TRUMAN (Exeter) writes: If Dr. Pereira Gray will consult Hudson's *Psychic Phenomena*, or his *Scientific Demonstration of a Future Life*, I think he will find an explanation of the case mentioned in the JOURNAL of December 6th, p. 762.

TREATMENT OF MALARIA.

LIEUT.-COLONEL F. W. COTTON, R.A.M.C. (Oswestry), writes with reference to the discussion on malaria (BRITISH MEDICAL JOURNAL, December 6th, 1919, p. 743), dissenting from the view that the noxious effects of quinine have been too much emphasized. Before statements to this effect are made, he says, further evidence is needed as to how much post-malarial mental depression, dyspepsia, etc., are due to quinine and how much to malaria. Little or nothing was said concerning the effects of alcohol and gastritis in producing relapses of the disease, and yet it is plainly evident that unless the body is in the best state to deal with disease-producing organisms, those organisms must gain the upper hand and thrive. One can generally cure malaria by giving quinine by the mouth, timed to the attack, in benign and quartan infections, and by any other route than the mouth in malignant malaria, one dose daily during the febrile and a few days after the febrile stages, and then follow up with a mixture of iron, arsenic, and calcium, with the most rigid attention to diet, open-air exercise and amusement; to eat, unless hungry, should be forbidden, and alcohol also should be strictly forbidden.

TEMPORARY R.A.M.C. OFFICERS IN THE E.E.F.

"TEMPORARY CAPTAIN" writes from Egypt: I should be grateful if you will grant me a short space in the JOURNAL to draw notice again to the position of temporary R.A.M.C. officers in this force. Many are being compulsorily retained here, though eligible for demobilization. A large number have been away from home for three or four years, and have had no U.K. leave, and are naturally anxious to return to their practices—if there is anything left to return to—or to try and learn something of their profession.

Applications to the higher medical authorities here are met with by the answer: "Vide my memo. No. —," or "This officer will be released as soon as he can be spared." My work since January of this year has averaged about fifteen minutes a day, and there are other officers who have even less to do. Regulars, both I.M.S. and R.A.M.C., are getting leave home; we are refused it unless we have signed for the Army of Occupation. The absolute indifference of the medical authorities here to our position is an additional cause of our discontent.

INTOLERANCE OF HUMAN MILK.

A FEW exceptional infants manifest a curious intolerance of human milk, which determines toxic symptoms of a character it is customary to describe as anaphylactic. They comprise sickness, acute stomach-ache immediately after the feed, urticarial manifestations, restlessness, and insomnia. It has been shown by Professor Weiss of Lyons that it is possible to protect the infant against the consequences of this morbid sensitiveness by subcutaneous injections of the very milk that causes the mischief. He injects from 5 to 15 c.cm. under the skin of the abdomen, and, except for a little local oedema, no reaction takes place. Cow's milk, on the contrary, containing a foreign albumin, determines a rise of temperature lasting twenty-four hours or so, but is not otherwise injurious. Should it be thought desirable to repeat the injection it is advised that the quantity should be given in divided doses as in reinjections of any kind of serum. The results are stated to be uniformly satisfactory, and the mechanism of the treatment suggests the possibility of extending its protecting influence to other forms of alimentary intoxication.

VACANCIES.

NOTIFICATIONS of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 33, 35, 36, 37, and 38 of our advertisement columns, and advertisements as to partnerships, assistantships, and locum tenencies at pages 34 and 35.

THE following vacant appointments of certifying factory surgeons are announced: Catrine (Ayr), Ketton (Rutland), Market Harborough (Leicester), Shardlow (Derby), Totnes (Devon).

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

	£	s.	d.
Seven lines and under	0	6	0
Each additional line	0	0	9
Whole single column	4	0	0
Whole page	12	0	0

An average line contains six words.

All remittances by Post Office Orders must be made payable to the British Medical Association at the General Post Office, London. No responsibility will be accepted for any such remittance not so safeguarded.

Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Wednesday morning preceding publication, and, if not paid for at the time, should be accompanied by a reference.

NOTE.—It is against the rules of the Post Office to receive *poste restante* letters addressed either in initials or numbers.